

CITY OF BIRMINGHAM

REPORT OF THE
MEDICAL OFFICER
OF HEALTH

FOR THE YEAR

1946



PUBLIC HEALTH DEPARTMENT,
THE COUNCIL HOUSE,
BIRMINGHAM, 3.

*To the Chairman and Members,
Health Committee.*

I find in the introduction to my report for 1945 the prophecy that, while we did not quite maintain in that year the low records of maternal mortality, infant mortality, etc., reached in 1944, these figures "could and would be reached again." Happily we have not had long to wait. The data for 1946, as set out in the present report, show that the maternal mortality and the infant mortality fell to the lowest levels so far attained in the City, while the general death-rate (11·3) was within one point of the rates recorded in each of the two preceding years.

The year was by no means an easy one for the staff engaged in the public health service. In matters of housing and of house repairs, the task both of sanitary inspectors and of housing inspectors has been harassing, complicated throughout by shortage of houses, of repair materials and of labour for the execution of repairs. The position has been of grave concern. Valuable action was taken by your Committee early in 1947 towards acceleration of the more urgent repairs, by the definition of a schedule of defects to be pressed for prompt completion, with postponement of requirements, for the time being, of less urgent items capable of using up materials, labour and time to an extent disproportionate to the results. Credit is due to Mr. Turley, Chief Sanitary Inspector, and to his inspectorial and clerical staff for the determined way in which they have faced and are overcoming their difficulties. Among these is the fact that in place of the 50 general sanitary inspectors on the staff in 1938, there are now only 22 available; yet in 1946 these paid 29,200 visits in response to complaints, as against 18,600 in 1938.

During the summer months a most comprehensive Housing Survey was carried out, throughout the whole City, on the instructions of the City Council. Mr. Lamb, the Chief Housing Inspector, with his staff is to be congratulated on the foresight and competence shown in the preparation and the conduct of a complex and delicate operation, capable if mis-handled of arousing much irritation and antagonism, but found in the event to meet with universal goodwill, while it yielded important results, reference to which is made in this report.

The shortage of nurses in hospitals, sanatoria, maternity institutions and nurseries continued to be a serious menace to the effective working of these services, and the public owe a debt of gratitude to the hard-pressed staffs who have managed nevertheless to carry on this vital work.

The shortage of sanatorium accommodation, noted in the report for 1945, continued to apply to the circumstances of 1946. Much enquiry was made towards extending the accommodation, by the use of hutted hospitals or by the acquisition of private mansions for conversion to institutional use. Negotiations for the purchase of Kyre Hall, in Herefordshire, for use as a sanatorium for children with early tuberculosis, were actively pursued during the year, and successfully concluded in 1947. Arrangements for the use of a hutted hospital for adult cases of tuberculosis were not successful during 1946, but have reached a more promising stage at the time of preparation of this report.

One melancholy item in the report is the marked increase in cases of venereal disease during the year. Happily the records for the first half of 1947 appear to support the surmise that the increase in 1946 was a temporary one, the product of the final stages of demobilisation, and not necessarily a more permanent feature of the health of the City ; for over the first six months of 1947 there has been a very marked reduction in incidence of both the main types of venereal disease, as judged by the new cases attending the clinics. If that favourable rate is found to continue, the records for 1947 may show in due course that the incidence has dropped again almost to pre-war level.

The great changes which the National Health Service Act, 1946, is to make in the contents of such reports as this, in the years from 1948 onwards, had not begun to make any serious impression in the year under review ; and it was not till mid-1947 that there began the stream of reports embodying proposals to be made statutorily by the health authority under Part 3 of the Act. More detailed reference to these, therefore, will come into the next annual report.

Throughout the year the general spirit of keenness everywhere in the Department and its many branches and services has been admirable, and I should like both to congratulate the staff on the fact, and to thank all for the spirit of co-operation which has been so marked a feature of their work. To yourself, Mr. Chairman, and to the members of the Health Committee, I am grateful for much kindness and consideration and staunch support in the work of the Public Health Service throughout the year.

I am,

Your obedient Servant,

H. P. NEWSHOLME,
Medical Officer of Health.

SECTION A

SUMMARY OF STATISTICS

For the Year 1946

Area (in acres)	51,147
Population (Census, 1931)	1,002,603
Population, estimated by Medical Officer (Civilians only)	1,017,100
(Based on housing survey, May–August, 1946).	
Population, estimated by Registrar-General (Civilians only)	1,044,600
Extracts from Vital Statistics of the year 1946 :	
Birth-rate per 1,000 population	22·5
Stillbirth rate per 1,000 total live and stillbirths	25·4
Crude Death-rate per 1,000 population	11·3

Maternal Mortality :—

	<i>Excluding maternal deaths after abortion</i>	<i>Including maternal deaths after abortion</i>
From sepsis :		
Rate per 1,000 live and still births	0·04	0·13
From other causes :		
Rate per 1,000 live and still births	0·60	0·72
	<hr/>	<hr/>
Total Maternal Mortality	0·64	0·85
	<hr/>	<hr/>

Infant Mortality :—

Deaths of infants under one year of age per 1,000 live births :		
Legitimate		39
Illegitimate		54
Legitimate and illegitimate		40

POPULATION AND MORTALITY STATISTICS

Population

A housing survey, carried out during 1946, gave an opportunity of an estimate of population. While, extending as it did over some six months, the survey had necessarily not the accuracy of a Census carried through on one day, it is likely to be more accurate than any figure based on other local data. The survey yielded a figure of 1,017,100.

Births (see page 20)

Deaths

The death-rate for 1946 was 11·3. The average rate for the ten years prior to 1946 was 11·9, while that for 1945 was 11·2. The death-rates for 1940 and 1941 were swollen by air raid deaths.

The changes in the death-rate in England and Wales and in Birmingham during the past forty-six years can be seen from the figures below, although the figures for 1940 and 1941, swollen as they are by air-raid deaths, obviously cannot fairly be compared with others.

DEATH-RATES IN BIRMINGHAM AND ENGLAND AND WALES

			<i>Birmingham.</i>	<i>England and Wales.</i>
1901-1905	.....	.....	16·5	16·0
1906-1910	.....	.....	15·0	14·7
1911-1915	.....	.....	14·6	14·3
1916-1920	.....	.....	13·4	14·4
1921-1925	.....	.....	11·5	12·1
1926-1930	.....	.....	11·6	12·1
1931-1935	.....	.....	11·2	12·0
1936	.....	.....	11·3	12·1
1937	.....	.....	11·7	12·4
1938	.....	.....	10·9	11·6
1939	.....	.....	11·4	12·1
1940	.....	.....	14·3	14·3
1941	.....	.....	13·2	12·9
1942	.....	.....	11·8	11·6
1943	.....	.....	12·1	12·1
1944	.....	.....	11·2	11·6
1945	.....	.....	11·2	11·4
1946	.....	.....	11·3	11·5

The death-rates in Birmingham from the more prominent causes of death over a series of years are shown below :—

			<i>Cancer</i>	<i>Diseases of the Heart and Blood vessels.</i>	<i>Bronchitis, Pneumonia, and other respiratory diseases.</i>
1937	.....	.....	1·62	3·40	1·40
1938	.....	.....	1·59	3·45	1·18
1939	.....	.....	1·55	3·65	1·16
1940	.....	.....	1·61	3·31	2·21
1941	.....	.....	1·70	3·10	1·94
1942	.....	.....	1·77	2·87	1·51
1943	.....	.....	1·83	3·02	1·73
1944	.....	.....	1·75	3·15	1·40
1945	.....	.....	1·84	3·14	1·44
1946	.....	.....	1·90	3·36	1·37

Amongst males 76·8% of cancer deaths were due to cancer of digestive and respiratory organs, whilst 64·5% of cancer deaths in women occurred in digestive and genital organs, and 21·1% were due to cancer of the breast.

SECTION B.

GENERAL PROVISION OF HEALTH SERVICES

1. General Services.

(a) Laboratory facilities

I—City Bacteriological Laboratory

The work done in the City Bacteriological Laboratory is set out in detail below :

GENERAL LABORATORY	<i>No. of Specimens.</i>
Diphtheria Swabs :	
(a) For practitioners	3,391
(b) For Fever Hospital	2,471
(c) For virulence test	324
Swabs for staphylococci	255
Swabs for streptococci	2,803
Fæces	8,007
Milks	531
Milk for tuberculosis	2,426
Precipitin tests	890
Sputum for tuberculosis	1,853
Shell-fish	21
Water samples	896
Widal's reaction	4,358
Coagulase tests	156
Miscellaneous	10,088
TOTAL	38,470

VENEREAL DISEASES LABORATORY

Blood for Wassermann reaction	46,016
Cerebro-spinal fluid—	
(a) For Wassermann reaction	1,643
(b) For cell count	727
Films for gonorrhœa	24,060
Urine examinations: (chemical)	972
Gonococcal fixation tests	7,049
Vaccines prepared	16
Cultures prepared	20,949
Van den Bergh's tests	5
Kahn tests	45,342
TOTAL —	146,779

II—City Analytical Laboratory

The following statement indicates the samples analysed in the City Analyst's Department :

Samples Analysed :

Food and drug samples	.....	5,379
Soot gauge samples	.....	24
Fertilisers and feeding stuffs	.....	22
Miscellaneous samples	.....	1,275
TOTAL	.....	<hr/>6,700 <hr/>

Samples Adulterated, etc. :

Samples adulterated	.....	397
False labels	.....	24
Number of vendors of incorrect samples	.....	262
Number of prosecutions	.....	29
Number of fines	.....	29
Amount of fines and costs	.....	£234/11/0
Number of cautions	.....	175

Details of this work are given in the Report of the City Analyst, printed separately.

III—Hospital Laboratories

Laboratories are provided at :

Dudley Road Hospital : General and biochemical.

Selly Oak Hospital : General and biochemical.

Little Bromwich Hospital : Bacteriological, infectious diseases.

Yardley Green Road Sanatorium : Bacteriological, etc., tuberculosis.

Carnegie Institute : General and biochemical.

(b) Ambulance Services

The Health Committee have four ambulances for acute infectious diseases (Little Bromwich Hospital) and two for tuberculosis. The ambulance services for the general hospitals are supplied through the Birmingham Hospitals Contributory Association in conjunction with the St. John Ambulance Brigade.

The Watch Committee have eight police ambulances for accidents and other casualties.

There are also ambulances at some of the large voluntary hospitals and at certain works.

(c) **Nursing in the Home**

Arrangements have been in force, over a period of years, for the home nursing of a number of conditions by the district nurses of the Birmingham District Nursing Association, and 455 cases were thus nursed during 1946. This figure includes 307 cases of pneumonia and 124 of puerperal pyrexia, and 32 children under five years old are included in the total of 455 cases.

Apart from hospital treatment, cases of ophthalmia neonatorum and of other forms of ophthalmia or eye injury capable of leading to blindness are visited in their homes, as far as necessary, by nurses from the Eye Hospital, an annual grant being paid to the hospital in respect of this service.

Removal of Aged and Infirm

During 1946, 51 cases were investigated with a view to possible removal to an institution under either Section 38 of the Birmingham Corporation (General Powers) Act, 1929, or Section 48 of the 1935 Act. Of this number 18 cases were voluntarily admitted to an institution, 4 cases died before any action could be taken, and 29 cases were considered outside the scope of either Section. In no case was it found necessary to obtain a Magistrate's Order for the removal of a case to an institution.

The difficulties of making suitable provision for the aged and infirm have increased during the past year, due in part to the acute housing shortage, and aggravated by the shortage of accommodation in institutions. While every possible help has been given by the Assistance Officers, it has often been found that several days have elapsed before admission to hospital could be arranged, as a not inconsiderable waiting list exists in most of the institutions.

In many cases also, the neighbours or relatives of the aged and infirm seek the help of this Department at the last possible moment, when the patient is in extremis and no form of treatment is of any avail.

Even under the most depressing home conditions the voluntary acceptance of institutional treatment is often very difficult to obtain, and a great deal of tact is required before removal can be accomplished.

(d) **Treatment Centres and Clinics**

Anti-Tuberculosis Centre. (See page 115)

Maternity and Child Welfare Centres. (See page 38)

Public Dispensaries (Voluntary)

Dispensaries for the treatment of the sick poor are provided by six different voluntary societies in the City, chief among which is the Birmingham General Dispensary. This latter, with different branches, treated 33,193 patients during the year, while the others provided treatment in a lesser proportion.

(e) **Hospitals**

PUBLIC GENERAL HOSPITALS

General Statistics

The statistics relating to the work of Dudley Road and Selly Oak Hospitals and Selly Oak Infirmary are given below.

IN-PATIENTS

	<i>Acute Sick.</i>		<i>Chronic Sick.</i>
	<i>Dudley Road</i>	<i>Selly Oak</i>	<i>Selly Oak</i>
	<i>Hospital.</i>	<i>Hospital.</i>	<i>Infirmary.</i>
*Total number of admissions (including infants born in hospital)	19,007	10,042	2,342
Number of women confined in hospital	3,086	937	—
Number of live births	3,034	913	—
Number of stillbirths	120	38	—
Number of deaths among the newly-born (under four weeks, born in hospital)	99	32	—
*Total number of deaths	1,203	415	1,090
*Total number of discharges (including infants born in hospital)	17,747	9,634	1,339

* Excluding E.M.S. cases and service casualties.

OUT-PATIENTS

	<i>Acute Sick.</i>		<i>Chronic Sick.</i>
	<i>Dudley Road</i>	<i>Selly Oak</i>	<i>Selly Oak</i>
	<i>Hospital.</i>	<i>Hospital</i>	<i>Infirmary.</i>
Number of persons seen in out-patient department	24,595	16,945	<i>Run in conjunction with Selly Oak Hospital.</i>
Total number of attendances	104,012	70,599	
Number of women seen at ante-natal clinic	2,897	1,160	
Total attendances at ante-natal clinic	12,092	6,105	

Dudley Road Hospital

This is a municipal general hospital for the acute sick, and is situated in the north-western portion of the City.

DR. T. M. ANDERSON, Medical Superintendent of the Hospital, reports as follows :—

The increasing demand for indoor hospital treatment in this area of the City is shown by the admission of 19,611 cases during 1946, which is a new record.

During the war years, our medical staff had often to work short-handed. Temporary appointments only could be made, and in a few cases, overstrain and ill-health was the result.

Our Public Health Authorities have now recognised that an improved system of medical staffing is long overdue, and efforts are being made to improve both working conditions and salaries in order to obtain the best possible candidates for these appointments.

A limited number of beds (on the average 100) will now be allocated to each whole-time Senior Physician and Surgeon who has, in his unit, a Chief Assistant along with a Resident House Physician or Surgeon. Each unit works together as a team, and shares its duties and periods of rest with other teams throughout the hospital. It is believed that this system, which is already in force in a few leading Municipal General Hospitals elsewhere, is an efficient and workmanlike arrangement and should lead generally to improved treatment and to a higher standard of work, which is our aim.

Shortage of nursing staff is, unfortunately, still a serious handicap, and Miss Snowden, Matron-in-Chief, reports that during the year 1946, we have been in great difficulty on the nursing side from the lack of trained nurses. The recruitment of probationers fell off in the latter half of 1946. The wastage of probationer nurses in their first year is still very high, and remains at 51%. During 1945 it was slightly higher, but round about the same figure.

The reasons for the wastage in the year under review were marriage, physical defects, and home difficulties, in that order.

Home difficulties have considerably increased the amount of over-stayed and special leave amongst the Nursing Staff. We have, however, managed to maintain full holidays, block system training, and ordinary working time-tables, without having to curtail the number of hospital beds. The sisters are working forty-eight hours and the nurses fifty-two hours per week. The health of the staff has been satisfactory.

Our shortage of trained nurses here is much aggravated when neighbouring hospitals may have beds, but not sufficient nurses to maintain them. On that account, alone, wards have been closed, and patients who should be transferred are left on our hands for long periods. This leads inevitably to overcrowding of our acute medical and surgical wards, and to a feeling of frustration in the minds of our medical and nursing staff, which is far from desirable.

Since November, 1945, female ward and theatre orderlies have been employed by us in order to relieve the nurses of domestic work while they are in training, and thus give them more time for the actual nursing of sick patients. Labour-saving appliances and other devices are used when possible in the kitchen, corridors and wards, such as electric scrubbers, polishers, etc. Mr. Preston, the Hospital Steward, points out that these obviate the necessity of manual cleaning of the corridors throughout the hospital. Mr. Preston stresses that, owing to the age of our buildings and plant, and lack of proper maintenance during the war years, extensive repairs have now to be undertaken.

Mr. Wentworth Taylor emphasises that our Maternity Department has been worked to full capacity during the year. It was originally built to deal with 75 in-patients, but now has to accommodate 125.

This entails considerable alteration to our ante-natal and out-patient clinics, in order to deal with the increasing numbers who now attend, and steps are being taken to meet this difficulty.

In our Radiological and Deep X-ray Department, Mr. D. H. Cummack reports that during the past year both diagnostic and therapy departments have worked to capacity. To relieve the pressure on existing units, the authorities have approved the purchase of additional major diagnostic and deep therapy apparatus. The number of requests for fluoroscopic examinations of the alimentary tract has recently increased greatly, but when the new diagnostic unit is in operation, it is hoped that the waiting list will be reduced.

Although the present shortage of nurses and overcrowding of wards may seem to cause a gloomy impression, we do not believe that this situation is a permanent one. There is no doubt that every effort must be made to popularize the profession, without at the same time losing its dignity and balance. Irksome restrictions of any kind which are not essential should be avoided, and we are all agreed in this Hospital that a reasonable balance of off-duty time and recreation is necessary for every healthy girl who is prepared to take up the nursing profession. We believe that the right people will eventually respond, but our present difficulty is how to carry on an important hospital service with an insufficient number of trained nurses. In spite of this we are still trying to hold on to our ideals of proper service. It is quite certain that the hospitals of the future will not function with efficiency unless they have an adequate supply of both medical and nursing staff, but I would point out that this is a concern not of sectional interests, but of the whole community.

I should like to thank those members of the hospital staff here who have worked with such energy and devotion to duty during the past year.

January 1st to December 21st, 1946.			
Admissions for the year	19,007	} Excluding E.M.S. cases such as War Casualties, Members of H.M. Forces, A.R.P. Services, Transferred War Workers, etc.	
Total discharges	17,747		
Total deaths	1,203		
No. of women confined in hospital	3,086		
No. of live births	3,034		
Maternal Deaths	4		
E.M.S. cases	604		
Duration of Stay		Excluding E.M.S.	Including E.M.S.
Under four weeks		16,986	17,468
Four weeks and under 13 weeks		1,826	1,974
Thirteen weeks or more		138	163
Average number of beds occupied			758
Highest number of beds occupied (on 8th April, 1946)			860
Lowest number of beds occupied (on 24th December, 1946)			648

Operations

Number of major operations	5,365
(Minor and dental operations excluded)	plus 905 bloods taken

Out-Patients

	<i>Excluding E.M.S.</i>	<i>Including E.M.S.</i>
Total number of out-Patients	23,699	24,595
Total attendances	100,668	104,012
Ante natal clinic (mothers)	2,897	—
Ante natal clinic (attendances)	12,092	—

SPECIAL DEPARTMENTS.

Pathological Department

Examinations	14,158
Autopsies	573

Bio-Chemical Department

Examinations	18,261
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Radiological Department

Radiographs	29,052
Fluoroscopic examinations	3,152
Examinations (patients)	13,988

These figures include 1,773 opaque meal examinations, 218 opaque enema examinations, 50 oesophageal examinations, and 1,065 examinations for pregnancy.

Physio-Therapy Department

Cases	6,861
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Dental Department

Attendances	1,125
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Selly Oak Hospital and Infirmary

This is a municipal general hospital for the acute sick, and its adjoining infirmary accommodates chronic sick. Both are situated on the border of Bournville in the southern sector of the City.

MR. R. P. S. KELMAN, Medical Superintendent, reports as follows :

This year has been an extremely busy one, in which there has been a steadily increasing demand on all the hospital services, while the war damage to the Hospital has been repaired and the departments have been re-organised to deal with their normal peace-time work. There has been not only an increased in-patient and out-patient turnover, but all departments show a considerable increase in activity. Our staff have steadily returned from the Services, and I am glad to report have settled down to their former posts extremely well. The only insoluble problem which has arisen has been that of providing sufficient resident accommodation for our nursing and domestic staff. Mainly because of this an extreme shortage of nurses and domestics has arisen, which has interfered very considerably with our normal working and has thrown an undue strain on these important sections of the staff. The opening of the first portion of the new Nurses' Home in the new year will help very considerably, but, even then, there will remain a tremendous deficit in staff accommoda-

tion for the Hospital and the Infirmary. This deficiency will be further partly met by the following :—

- (1) The return of Block VI from the National Fire Service and its re-modelling to accommodate 27 nursing staff.
- (2) The re-modelling and improving of the old Nurses' Home in the Infirmary to provide much better accommodation for 40 instead of 21 staff.

The final shortage of staff accommodation for the two institutions will remain at 309. Many valuable recruits have been lost throughout the year owing to this difficulty and, as it takes several years to build up an increased and properly balanced student nursing staff, it will be apparent that this difficulty will continue.

It is pleasing to note that the incidence of staff sickness has been less during the current year.

For some time the strain on the nursing staff has been further partly met by engaging more ward orderlies (male and female), by divorcing some of the special departments (Casualty, Out-patient Dept., and X-ray Dept.), from the training school, by engaging assistant nurses and more trained staff, and finally by reducing admissions to a minimum. This last has produced a great increase in our waiting lists, which unfortunately is producing hardship to our patients.

The inadequate facilities available for the out-patient work has been alleviated somewhat by utilising temporarily Block II of the Infirmary, which had to be closed owing to lack of staff, in addition to C.5 and C.6 wards of the Hospital, which have now been repaired and re-decorated. The re-modelling of the old hospital laundry as a Physiotherapy and Dental Department will enable Block II to be released again for its proper purpose, but it is quite apparent that the old pre-war scheme of providing an entirely new Out-patient building on the south side of Raddlebarn Road is the only real permanent solution. The appointments system has not only been of great value to the patients, but has been of most valuable assistance in spreading over the work more evenly.

The following weekly out-patient clinics have been held throughout the year :

(a) Consultative Clinics :							
General medical	....	....	....	....	....	....	6
Children's diseases	....	....	....	....	....	....	1
General surgical	....	....	....	....	....	....	7
Ear, nose and throat	....	....	....	....	....	....	2
Gynaecological	....	....	....	....	....	....	2
Obstetric—Ante-natal	....	....	....	....	....	....	2
Post-natal	....	....	....	....	....	....	1
Baby clinic	....	....	....	....	....	....	1
Psychological	....	....	....	....	....	....	1
Dental	....	....	....	....	....	....	1

(b) Daily Treatment Clinics :

Fracture clinic

Septic hand clinic

Minor surgical out-patient clinic

Physiotherapy and occupational therapy clinics.

The limited facilities in the admission and casualty section of the hospital have been a great source of worry. All cases for both the Hospital and the Infirmary are dealt with in this department and it is of paramount importance that the scheme sanctioned for providing a new building between the two institutions be proceeded with at the earliest opportunity.

The usual difficulties arising from outbreaks of infectious disease in the children's section have occurred, but I am glad to report that these have not been of a serious nature and that the problem will now be eased by the approval of the Ministry to the barrier conversion of A.1 ward.

The Committee have fully realised the lack of reasonable amenities for the manual staff and have approved structural alterations which will provide adequate male and female staff locker and rest rooms. The daily women in particular have fared badly in this respect, and these improvements should help recruiting.

The new canteen under the charge of our Canteen Manageress, Miss Burdett, has proved a great success and ensures that all sections of the staff are able to be fed adequately when on duty. It has become a community centre where the staff of both institutions meet. The high standard maintained reflects great credit on the Steward and the Manageress. Several social gatherings have been held in the canteen during the evenings, chiefly under the management of our active Male Officers' Recreation Club.

The social activities of the Hospital and the Infirmary have been much re-invigorated and many dances have been organised by the different units of the Hospital and the Infirmary. The cricket club has had an extremely successful year. Three hard tennis courts are now in commission again. The Nurses' Representative Council has become a most useful body, and has done much to promote the welfare and social activities of the staff.

The year has seen an unusual number of medical and technical meetings in the Hospital. The usual clinical meetings of the British Medical Association and of the University of Birmingham Medical Society have been held and been well attended. In addition our own Selly Oak Hospital Medical Society has held its fortnightly clinical meetings. The largest meeting held was that of the Institute of Hospital Administrators, which was attended by officers from all parts of the United Kingdom. The Medical Superintendents' Society met at the Hospital in November.

The delay in the building of the new training school approved by the Committee is still causing difficulty, but some improvement has been made by using the old Isolation Block as a Preliminary Training School. This building has long been considered unsuitable for patients and, with the shortage of nursing staff, there was no alternative but to close it.

It is inevitable that staff changes must occur, but we were extremely sorry to lose two of our senior medical staff, Mr. P. V. Reading, Otorhinolaryngologist, and Dr. C. G. Baker, Physician, our senior Almoner, Miss J. M. Howard, and our Chief Laboratory Technician, Mr. F. E. Balcon. However, we welcome in their places Mr. E. Collins, Mr. A. G. S. Calder, Dr. G. G. Gillam, Miss B. H. Bews, and Mr. W. H. Valentine. Another temporary loss has been that of our Radiologist, Dr. W. Tennent, who has gone into the Services. We have been fortunate in gaining the services of Dr. O. E. Smith during his absence. Likewise several of our officers, after many years of valuable service, have retired.

Considerable improvements have been made in our catering arrangements, particularly from the point of view of our night duty nursing staff. The main kitchen has now a 24 hours' service, enabling all staff to have their meals off the wards. The next improvement needed is a special diet kitchen which it is anticipated will be under the special care of a dietitian.

The new gymnasium and occupational therapy department was opened early in the year. Two qualified occupational therapists have been appointed to cope with the needs of the two institutions and the work is being divided into purely diversional occupational therapy and remedial occupational therapy. Arrangements are being made for the work of the former to be augmented by the assistance of voluntary workers, allowing the latter to be more completely covered by the trained occupational therapists. The following remedial crafts will be taught :

Light Crafts :	Needle work
	Toy making
	Slipper making
	Macrame work
	Weaving
	Leather work
	Painting and modelling
	Rug making

Heavy Crafts :	Foot power looms
	Joinery
	Pottery
	Light metal work
	Basketry
	Rug making (foot power loom)

The Obstetric Department has worked to full capacity throughout the year, and is becoming more and more a centre for abnormal midwifery, as the following statistics show :—

Total number of women confined in Hospital	944
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Complications of pregnancy :

Congenital abnormalities of genital tract	3
Severe anaemias requiring blood transfusion before labour	24
Hyperemesis	2
Hydramnios	22
Hypertension	2
Cardiac Disease	15
Ante partum haemorrhage—treated by vaginal methods	24
Abnormal presentations	40
Pre-eclampsia	40
Eclampsia	2
Twin births	39
Infections (severe) of genital tract :	
(a) Non-specific	16
(b) Venereal disease—treated during pregnancy	30
Contracted pelvis	66
Fibroids complicating pregnancy	16
Ovarian cysts complicating pregnancy	2

343

Abnormalities of labour	346
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(Included in the abnormalities of labour there were 55
forceps deliveries and 88 Caesarean Sections).

The general work of the Hospital has been greatly affected in all departments by the nursing staff shortage. Not only have admissions had to be curtailed, but list operation sessions have had to be halved owing to the inability to produce a full staff for the operating theatres. It is interesting to compare what has happened in the two institutions working side by side. In the Infirmary the nursing staff have worked a 96-hour fortnight with resultant closure of wards, while in the Hospital the student nurses have worked not less than a 108-hour fortnight with no further closure of wards. The Hospital has been kept going at the expense of the nursing staff, and it is to be hoped that this will be rectified during the coming year. In the Hospital there still remains one ward to be re-opened, which had to be closed to enable war damage repairs and re-decoration to take place. It is hoped to re-open this ward by June, 1947.

Great credit is due to the departmental staffs for the way in which they have contributed to bringing the Hospital and Infirmary back to peace-time standards. The engineering and building maintenance staffs have almost caught up with overdue repairs to the general services, the head gardener and his staff have improved the general standard of the grounds, and the head porter and his staff have worked with a will in the changing over of wards and in the general tidying up of the institutions. A general tendency has appeared for more and more of the domestic work in hospitals to be taken over by men. Great enthusiasm has developed in all sections of the staff and all have contributed of their best.

The total admissions to the Hospital for the year has been 10,220 and the average duration of stay of patients has been 15 days. The following figures for the special departments give some indication of the work done.

Operations

Major operations	4,370
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Pathology Department

Examinations	20,593
Autopsies	336

Bio-chemical Department

Examinations	5,743
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Radiological Department

Radiographic examinations	20,157
Fluoroscopic examinations	1,174
Films used	17,833

Physio-therapy Department

Cases	4,650
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Dental Department

Attendances	1,184
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Selly Oak Infirmary

Selly Oak Infirmary has passed through one of the most difficult periods in its history. With the removal of staff controls an extremely difficult position developed, in which one ward after another had to be closed owing to lack of staff. Every device possible was brought into being to deal with the growing demand for admission. Pressure was brought to bear on all relatives to take home their people when fit, to enable those requiring admission to be dealt with. Never before has such a list of deserving chronic sick been kept waiting for admission. These waiting lists

have been under constant review and the splendid co-operation of the Assistance Department in selecting the most urgent cases for admission is much appreciated. It is pleasing to report that the staffing position is now showing a steady improvement, and it is expected that the full number of beds will steadily come into use again. But here again the lack of resident staff accommodation is our main difficulty in recruitment—many assistant nurse applicants are prepared to take up resident posts only. Furthermore, in order to commence an assistant nurse training school, adequate resident accommodation is required. The commencement of such a training school should place the staffing on a sound foundation and indirectly assist the other institutions in the City with their staffing. A tribute should be paid to the nursing staff who carried on steadily throughout this critical period when all did more than should be reasonably demanded of them. It is quite apparent that the number of chronic sick beds provided in the City is inadequate.

Owing to shortage of materials slower progress has been made in the Infirmary than in the Hospital with war damage repairs and all re-decoration still remains to be done.

In October, Miss M. Fenton resigned her appointment as Matron, and Miss E. V. Wheeler was appointed as her successor.

Special efforts have been made to improve the catering arrangements. Domestic staff shortages have forced a complete change to male cooks to take place, and it has proved most successful. The standard of patients' meals has been much improved and a 24-hour kitchen service has been established for staff so that all staff meals during the day and night are taken off the wards. There is still a shortage of modern equipment for efficient food distribution, but this is being steadily rectified. The new kitchen sanctioned before the war is still badly wanted, but the best use possible of the old kitchen is being made by the installation of more modern equipment.

The nursing in the Infirmary is steadily becoming heavier. In the adult section the number of cases capable of getting out of bed is becoming fewer. It follows that the standard of nursing and medical attention required becomes higher, and in my opinion this is taking place. The different types of chronic cases are gradually being grouped into separate sections, and more expert attention is being given to them. For example, age is becoming no bar to the operative treatment of femoral fractures and the male urological section of the Infirmary is under the special care of our Urologist.

It should be noted that 57% of the admissions to the Infirmary are discharged home. The total admissions to the Infirmary for the year has been 2,348 and the average duration of stay of patients has been 96 days.

REPORT ON MATERNITY AND CHILD WELFARE

By DR. JEAN M. MACKINTOSH,
Senior Assistant Medical Officer of Health (for Maternity and Child Welfare).

CHIEF STATISTICS, 1946.

Birth Rate, 22·5 per 1,000 population.

Illegitimate Birth Rate, 6·8 per cent. of total live births.

Infant Mortality Rate, 40 per 1,000 live births.

Stillbirth Rate, 25·4 per 1,000 total births.

Neo-natal Mortality, 22·1 per 1,000 live births.

Maternal Mortality in Childbirth :

including deaths after abortion, 0·85 per 1,000 live and stillbirths.

excluding deaths after abortion, 0·64 per 1,000 live and stillbirths.

Births

GENERAL COMMENTS

The total birth-rate has risen from 20·2 in 1945 to 22·5 in 1946. The illegitimate birth-rate has shown a welcome fall, although it is still twice as high as in 1939.

The illegitimate birth-rate

<i>Illegitimate Births per 1,000 live births</i>			<i>Illegitimate Births per 1,000 live births</i>		
1939	.....	36·1	1943	.....	57·6
1940	.....	36·8	1944	.....	64·1
1941	.....	48·2	1945	.....	92·0
1942	.....	54·3	1946	.....	67·6

Infant and Child Mortality

Infant Mortality. The infant mortality for 1946 was 40. This not only shows a marked fall from the figure of 49 in 1945, but also is a new low record, as the following table shows :—

	<i>Birmingham.</i>	<i>England and Wales.</i>		<i>Birmingham.</i>	<i>England and Wales.</i>
1939	60	50	1943	55	49
1940	70	55	1944	42	46
1941	69	59	1945	49	46
1942	56	49	1946	40	43

The improvement in the infant death-rate, when compared with 1945, is entirely in the period over one month. In 1945 the infant death-rate between the ages of 1 and 12 months was 26·5 ; in 1946 it was 18·5.

The infant mortality rate per 1,000 illegitimate births was 54, whilst that for the legitimate births was 39 per 1,000.

The following table shows the main causes of infant death for 1944, 1945 and 1946 :—

<i>Year.</i>	<i>Total Infant Death-rate</i>	<i>Infant Death Rate from</i>				
		<i>Respiratory Disease.</i>	<i>Diarrhoea and Enteritis.</i>	<i>Congenital Malformations.</i>	<i>Atrophy, Debility, Marasmus, Atelectasis.</i>	<i>Injury at Birth.</i>
1944	42	7·9	5·8	5·7	2·6	2·8
1945	49	11·2	7·3	5·7	1·8	2·6
1946	40	8·1	6·4	4·8	2·4	4·6

An interesting feature this year is that the death-rate from birth injury has almost doubled—in 1945 it was 2·6 ; in 1946 it was 4·6. No single factor could be found for the sharp rise in the death-rate from this cause. Three-quarters of the deaths from this cause occurred in hospital, and the majority of the infants dying in hospital were born there.

Neo-natal Mortality

The neo-natal death-rate for 1946 is a little lower than that for 1945, namely 22·1.

	<i>Rate per 1,000 live births.</i>					
1939	26·3
1940	28·8
1941	29·1
1942	30·1
1943	25·7
1944	22·2
1945	22·5
1946	22·1

INFANTILE MORTALITY DURING THE YEAR 1946

Deaths from stated causes in Weeks and Months under One Year of Age

<i>Cause of Death</i>	<i>WEEKS</i>					<i>MONTHS</i>				<i>Total Deaths under One Year</i>
	0—	1—	2—	3—	<i>Total under One Month</i>	1—	3—	6—	9—	
Measles	—	—	—	—	—	1	—	—	3	4
Whooping Cough	—	—	—	—	—	4	6	9	5	24
Influenza	—	—	—	—	—	—	3	2	—	5
Tuberculous Meningitis	—	—	—	—	—	—	—	2	—	2
Other Tuberculous Diseases	—	—	—	—	—	—	2	3	2	7
Cerebro-Spinal Fever	—	—	—	—	—	1	1	2	1	5
Meningitis (not Tuberculous)	—	—	—	—	—	—	—	—	1	1
Convulsions	1	—	—	—	1	1	1	—	—	3
Bronchitis	2	1	1	2	6	6	6	2	1	21
Pneumonia (all forms)	11	8	7	5	31	57	42	16	11	157
Gastritis	—	—	1	—	1	2	—	—	—	3
Diarrhoea, Enteritis, etc.	1	6	1	4	12	58	51	17	2	140
Congenital Malformations	45	24	3	8	80	9	10	5	2	106
Premature Birth	163	6	5	4	178	1	—	—	—	179
Atrophy, Debility & Marasmus	3	1	—	1	5	2	—	1	—	8
Atelectasis	39	3	1	1	44	—	—	—	—	44
Injury at Birth	95	4	1	—	100	2	—	—	—	102
Suffocation (Overlying)	—	—	1	—	1	—	2	—	—	3
Otitis media and mastoiditis	—	—	—	1	1	2	4	5	—	12
Other Causes	36	5	2	5	48	19	9	10	8	94
All Causes	396	58	23	31	508	165	137	74	36	920

Neo-natal death rate 22·1 per 1,000 live births. Total Infant Mortality rate 40 per 1,000 live births.

If the Birmingham births occurring in Birmingham only are examined and births occurring outside the City and credited to Birmingham are excluded, then we find that the neo-natal death-rate shows a slight rise over that of 1945. The details are given in the following table :—

NEO-NATAL DEATHS PER 1,000 LIVE BIRTHS

	1942	1943	1944	1945	1946
<i>Ante-natal Causes :</i>					
Toxaemia	2.3	1.3	1.45	1.5	1.3
Syphilis	2.3	0.2	0.07	0.5	0.9
Rhesus		2.1	0.08		
Other causes			1.30		
	4.6	3.6	2.9	3.5	4.0
<i>Intra-natal Causes :</i>					
Breech.....	1.8	0.7	0.5	0.5	0.8
Other difficult labours	4.6	3.0	3.1	3.0	3.6
Other causes		0.7	1.0		1.3
	6.4	4.4	4.6	4.0	5.7
<i>Post-natal Causes :</i>					
Infections	3.6	3.1	3.1	2.4	3.1
Other Causes	1.8	2.0	1.5	2.0	1.4
	5.4	5.1	4.6	4.4	4.5
<i>Foetal abnormality</i>	5.4	5.3	4.2	3.8	3.3
<i>Prematurity only</i>	8.2	7.2	5.8	5.9	4.7
<i>TOTAL</i>	30.0	25.6	22.1	21.6	22.2

The rise has been due to ante-natal, intra-natal and post-natal causes, whereas the neo-natal death-rates from foetal abnormality and prematurity have fallen. It is satisfactory to see that the death-rate from toxæmia continues to fall but not so pleasing to note that the death-rate following breech delivery has risen, especially when this is considered in conjunction with a similar rise from the same cause in the stillbirth rate.

Stillbirths. The stillbirth rate for 1946 is the same as for 1945, namely 25.

	Rate per 1,000 Total Births.					
1939	36
1940	33
1941	29
1942	28
1943	27
1944	25
1945	25
1946	25

The following table shows the causes of stillbirths occurring in Birmingham in women domiciled in the City :—

STILLBIRTHS PER 1,000 TOTAL BIRTHS (LIVE AND STILL)					
	1942	1943	1944	1945	1946
<i>Ante-natal Causes :</i>					
Toxaemia	4.9	2.9	3.5	3.9	2.6
Syphilis	—	0.3	0.2	0.4	0.2
Rhesus	—	—	0.25	0.3	0.4
Other causes	2.4	3.2	2.05	2.2	2.9
	7.3		6.0		6.1
	6.4		6.8		6.1
<i>Intra-natal Causes :</i>					
Breech	2.9	2.9	4.6	1.9	3.3
Other difficult labours	—	4.0	2.4	4.1	3.2
Other causes	8.2	3.1	2.4	2.3	2.5
	11.1		9.4		9.0
	10.0		8.3		9.0
<i>Foetal abnormalities</i>	4.6	5.0	4.0	3.3	3.9
<i>Unknown</i>	6.3	5.5	5.9	6.3	6.6
<i>TOTAL</i>	29.3	26.9	25.3	24.7	25.6

Here, too, the rate shows a rise over 1945. The chief cause of this rise is that the rate for stillbirths following breech delivery has almost doubled. An analysis of the figures gives the following information regarding stillbirths following breech delivery :—

Born at home.	36 i.e. 24.0%
Born in institution	98 i.e. 65.3%
Booked at home but delivered in institution	16 i.e. 10.7%
	<hr/> 150 i.e. 100% <hr/>

There is also a slight rise in the stillbirth rate following foetal abnormality and where the cause is unknown. It is satisfactory to note that the stillbirth rate following toxæmia has shown a fall.

Infant Death-rate and Stillbirth Rate according to Welfare Centre Districts.

The following table shows the infant death-rate and stillbirth rate according to Welfare Centre districts :—

	Infant Death- Rate.	Still- Birth- Rate.	Total Infant Death- rate and Stillbirth Rate.
Tennal Road	17	16	33
King's Heath	21	21	42
Tower Hill	20	23	43
Stirchley	23	24	47
Bromford	34	15	49
Handsworth	35	15	50
Selly Oak	20	30	50
Acoccks Green	32	20	52
Kingstanding	30	24	54
Northfield	36	19	55
Horrell Road	32	24	56

	<i>Infant Death- Rate</i>	<i>Still- Birth- Rate</i>	<i>Total Infant Death- rate and Stillbirth Rate</i>
Washwood Heath	38	23	61
Hay Mills	36	25	61
Treaford Lane	34	28	62
Greet	36	29	65
Weoley Castle	47	21	68
Harborne	33	35	68
Carnegie	45	24	69
Erdington	41	28	69
Floodgate Street	35	34	69
Kettlehouse	42	27	69
Stratford Road	43	26	69
Lansdowne Street	50	20	70
Trinity Road	45	25	70
Sutton Street	45	27	72
Monument Road	50	24	74
Yardley Wood	39	35	74
Lancaster Street	53	25	78
Hope Street	55	26	81
Lea Hall	61	20	81
Langley Road	50	32	82
Irving Street	54	30	84

For the purpose of comparison of the districts with the lowest and highest infant death and stillbirth rates, the five lowest have been grouped together (Group I), and the five highest (Group II). The following table brings out the salient differences :—

GROUP I

<i>Total Live Births.</i>	<i>Infant Mort- ality Rate.</i>	<i>Neo- natal Death- Rate.</i>	<i>Still- birth Rate.</i>	<i>Respir- atory Death- Rate.</i>	<i>Diarrhoea and Enteritis Death Rate.</i>	<i>Premat- urity Death- Rate.</i>	<i>Birth Injury Death- Rate.</i>	<i>Congen- ital Malform- ations.</i>
3,360	23	14	21	5.6	3.0	4.2	2.6	3.8

GROUP II

3,734	53	26	27	11.7	9.6	10.2	4.5	5.8
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Prematurity

Dr. Crosse has recently prepared some figures which show what an important influence prematurity has on the stillbirth rate and infant death-rate. These are given below, and relate only to City residents :—

	1943.	1944.	1945.	1946.
Total births in City	20,912	22,386	20,200	22,807
% premature	6.04	6.3	7.2	7.9
Total stillbirths	536	566	500	585
% premature	41.4	44.2	44.8	41.3
Total live births	19,376	21,820	19,700	22,222
% premature	5.4	5.4	6.2	7.1
Total neo-natal deaths	496	482	436	493
% premature	58.7	59.3	59.2	54.4

Although only between six and seven per cent. of the births are premature, yet prematurity accounts for approximately half the still-birth and neo-natal deaths.

The causes of stillbirth and neo-natal death among premature babies (i.e., 5½ lbs. and under), and among those weighing more than 5½ lbs. are compared in the table below. The premature rates are given as per 1,000 premature births, and the rates of those over 5½ lbs. as per 1,000 births over 5½ lbs.

STILLBIRTH RATE

	1943.	1944.	1945.	1946.
<i>Ante-natal causes</i>				
Premature	54.0	58.0	56.8	46.6
Over 5½ lbs.	3.2	2.5	3.0	2.3
<i>Intra-natal causes</i>				
Premature	35.0	30.8	24.7	14.4
Over 5½ lbs.	8.3	8.0	7.4	8.8
<i>Foetal abnormality</i>				
Premature	45.0	44.2	29.6	27.8
Over 5½ lbs.	2.0	1.2	1.1	1.9
<i>Unknown</i>				
Premature	39.0	42.0	44.1	45.5
Over 5½ lbs.	3.2	3.4	3.2	3.3

NEO-NATAL DEATH RATE

	1943.	1944.	1945.	1946.
<i>Ante-natal causes</i>				
Premature	61.0	49.0	51.1	45.6
Over 5½ lbs.	0.35	0.3	0.4	0.81
<i>Intra-natal causes</i>				
Premature	33.0	37.0	21.0	24.9
Over 5½ lbs.	2.7	2.8	3.0	4.17
<i>Post-natal causes</i>				
Premature	32.0	30.0	20.0	21.8
Over 5½ lbs.	3.55	3.2	3.4	3.20
<i>Foetal abnormality</i>				
Premature	19	20	22	10.9
Over 5½ lbs.	4.6	3.6	2.8	2.72
<i>Unknown</i>				
Premature	133	107	98	68.6
Over 5½ lbs.	—	—	—	—

The influence of specialised hospital care on the survival rate of premature babies is shown in the following table prepared by Dr. Crosse :—

CITY OF BIRMINGHAM 1945 AND 1946

PERCENTAGE DEATH-RATE AMONG PREMATURE INFANTS

	<i>Under</i> 2 lbs.	2—3 lbs.	3—4 lbs.	4—5 lbs.	5—5½ lbs.	<i>All</i> <i>weights.</i>
<i>Born and treated in " Sorrento "</i>						
<i>(Premature Baby Block)</i>						
(332 babies, 44% over 5 lbs.)	100%	73%	34%	7·0%	2·7%	13·5%
<i>Born and treated in other hospitals</i>						
(1,365 babies, 45% over 5 lbs.)	100%	88%	42%	12%	7·0%	21·4%
<i>Born at home</i>						
75% kept at home, and 25% transferred to various hospitals either early (small weights) or late (after infected)						
(627 babies, 58% over 5 lbs.)	100%	75%	43%	16%	4·4%	17·0%
<i>All cases</i>						
(2,324 babies)	100%	82·0%	41·0%	13·0%	5·3%	19·0%

Illegitimate Infant Death-rate

The following is the illegitimate death-rate compared with the legitimate death-rate :—

	<i>Legitimate</i> <i>Infant</i> <i>Death-rate.</i>	<i>Illegitimate</i> <i>Infant</i> <i>Death-rate.</i>		<i>Legitimate</i> <i>Infant</i> <i>Death-rate.</i>	<i>Illegitimate</i> <i>Infant</i> <i>Death-rate.</i>
1940	70	69	1944	41	62
1941	69	75	1945	49	56
1942	54	83	1946	39	54
1943	56	52			

Maternal Mortality in Childbirth

The deaths of women classed to pregnancy and child-bearing in Birmingham during 1946 gave a maternal mortality rate of 0·85 per 1,000 live and stillbirths. If deaths from abortion are excluded, the rate is 0·64 per 1,000 live and stillbirths.

Rate per 1,000 live and still births.
(excluding abortions).
Birmingham. England and Wales.

1940	.....	.....	.....	.....	1·74	2·16
1941	.....	.....	.....	.....	1·95	2·23
1942	.....	.....	.....	.....	1·82	2·01
1943	.....	.....	.....	.....	1·35	1·84
1944	.....	.....	.....	.....	0·95	1·53
1945	.....	.....	.....	.....	1·21	1·46
1946	.....	.....	.....	.....	0·64	1·24

This constitutes a new low record.

At the request of the Ministry of Health, a medical enquiry has been made in the case of every maternal death in childbirth during each year since 1929. The information so obtained, direct from doctors, midwives and hospitals, makes it possible to classify the deaths more accurately than from the consideration of the death certificates only.

The Birmingham maternal deaths occurring in the City during 1946 have been classified as follows :—

A. Deaths due to pregnancy and childbirth	20
B. Deaths due to associated conditions	11
TOTAL	31

A. Deaths due to Pregnancy and Childbirth.

1. Not associated with a Notifiable Birth.

(a) <i>Abortion :</i>	
Septic	2
Non-septic	2
	<hr/>
	4
(b) Ectopic	1
(c) Toxaemia	1
	<hr/>
Total	6

2. Associated with a Notifiable Birth.

(a) <i>Sepsis :</i>	
Abnormal labour	1
(b) <i>Toxaemia :</i>	
Eclamptic	2
Non-eclamptic	4
	<hr/>
	6
(c) <i>Haemorrhage</i>	0
(d) <i>Shock after abnormal labour :</i>	
Difficult forceps (Ruptured uterus in 1 case)	3
Inverted uterus	1
Twin delivery	1
Precipitate labour	1
	<hr/>
	6
(e) <i>Embolism</i>	1
	<hr/>
Total	14

B. Deaths due to Associated Causes :

Tuberculosis	5
Heart disease	2
Pneumonia	1
Thyrototoxicosis	1
Fat embolism	1
Diabetes	1
	<hr/>
Total	11

Estimation of Avoidable Factors

A review of the circumstances of every case of maternal death makes it possible to estimate whether or not there was any avoidable factor, and in this respect the cases have been classified according to the following table :—

Abortions and ectopic gestations are not included in this table, but cases of death due to associated conditions are included.

Two or more factors may have been present in any one case.

TABLE I.

	<i>Sepsis</i>	<i>Toxaemia</i>	<i>Other Obstetric Causes</i>	<i>Associated Conditions</i>
	(1)	(6)	(7)	(11)
Lack or inadequacy of ante-natal care	1	6	0	0
Lack or inadequacy of obstetric facilities	0	0	0	0
Lack or inadequacy of specialist or hospital treatment	0	0	2	1
Lack of co-operation of patient or her friends	0	1	1	1
Safety only by avoidance of pregnancy	0	0	0	0
No avoidable factor	0	1	5	10
Total number of cases in which one or more avoidable factors were present				10 (38·5%)
Total number of cases in which death apparently was inevitable				16
Total				26

Comparison with Previous Years

A comparison of the death-rate figures in the principal groups with those of previous years is shown hereunder :—

<i>Death-rate per 1,000 Live and Stillbirths.</i>						<i>Due to Associated Conditions.</i>	
	<i>Abortion.</i>	<i>Sepsis.</i>	<i>Toxaemia.</i>	<i>Haemorrhage</i>	<i>Other Causes.</i>	<i>Total</i>	
1942	0·52	0·57	0·68	0·16	0·36	2·29	0·89
1943	0·48	0·43	0·53	0·19	0·15	1·78	0·34
1944	0·43	0·17	0·35	0·09	0·35	1·39	0·74
1945	0·39	0·29	0·49	—	0·15	1·32	0·44
1946	0·26	0·04	0·26	—	0·30	0·86	0·47

Puerperal Sepsis and Puerperal Pyrexia

The following table shows the number of cases of puerperal pyrexia during 1946 and the preceding four years :—

The out-of-city cases are those not normally resident in Birmingham, but coming into the City for confinement.

	1942.	1943.	1944.	1945.	1946.
Total Puerperal Pyrexia cases	381	396	352	338	310
Out-of-City cases	22	25	20	32	13
Birmingham cases	359	371	332	306	297

Detailed information is obtained in the Birmingham cases, and is shown in the following tables :—

	1942.	1943.	1944.	1945.	1946.
Number of cases investigated	359	371	332	306	297
Primiparae	184	168	156	152	171
Multiparae	120	123	128	117	96
Parity not stated, including abortions	55	80	48	37	30
Abortions	39	55	26	28	21
Transferred to hospital for treatment	127	127	111	84	85
Already in hospital	150	153	117	117	127
District nurse	50	73	67	66	51
Midwife or relative	14	4	6	10	10
Not known	18	10	—	—	1
Consultant called in	—	4	5	1	2
Deaths : (a) Childbirth	8	5	5	4	2
(b) Abortion	1	1	—	1	1

The sufficiency of ante-natal care in the 297 Birmingham cases of puerperal pyrexia in 1946 was as follows :—

Sufficient ante-natal care	238
Insufficient ante-natal care	12
Not stated (including abortions)	47
	<hr/> 297 <hr/>

The 297 Birmingham cases of puerperal pyrexia have been analysed as far as possible, with a view to discovering the cause of the pyrexia. The suggested causes are as follows :—

1. <i>Due to infection of the Genital Tract</i>	140 (47%)
Uterine infection	53
Subinvolution	22
Septic abortion	21
Retained products	21
Perineal sepsis	11
White leg	6
Septicaemia	3
Parametritis	3
2. <i>Due to Extra-Genital causes</i>	130 (44%)
Mastitis	41
Respiratory	39
Urinary infection	29
Tonsillitis	3
Tuberculosis	2
Constipation	2
Reaction to blood transfusion	2
Septic teeth	1
Sinusitis	1
General peritonitis	1
Rheumatism	1
Pulmonary Infarction	1
Cellulitis of arm	1
Enteritis	2
Phlebitis	4
3. <i>Causes unknown</i>	27 (9%)

Ophthalmia Neonatorum

During the year there were 831 cases of ophthalmia neonatorum notified, of which 31 were treated in hospital. Only a very small proportion of these were due to gonococcal infection and no impairment of vision occurred in any case reported to the Department.

Pemphigus

Number of cases of pemphigus which occurred on the district during 1946	8
Admitted to hospital	2
Nursed at home :—	
(a) by district nurse	2
(b) by relative	4
Number of cases of pemphigus which occurred in institutions during 1946	19
All cases of pemphigus which occurred during 1946 recovered.	

MATERNITY SERVICES

The births occurring in the City during the year were as follows :—

	<i>Live.</i>	<i>Stillbirths.</i>
Births notified	23,417	701
Failed to notify	212	3
	<hr/> 23,629	<hr/> 704
	<hr/>	<hr/>
Total : 24,333*		

*This figure does not include Birmingham confinements occurring outside the City, nor births in St. Chad's Hospital, but it does include the confinements of a number of persons whose residence was outside.

Medical practitioners were engaged for the confinement in 19·1%, and were called in by midwives for confinements in 4·1%, while midwives alone attended 76·8% of confinements in the patients' homes ; 52·2% of all confinements in the City occurred in institutions.

This is set out in detail as follows :—

DOMICILIARY MIDWIFERY

Attended by midwives only	8,704
Doctor booked for confinement	2,161
Doctor called in for confinement by midwife	460
Attended by ambulance nurses	147
	<hr/> 11,472
	<hr/>

INSTITUTIONAL MIDWIFERY.

Total confinements in	Nursing Homes	.....	1,863
"	"	General Hospital	64
"	"	Hope Lodge	22
"	"	at 42, Park Hill	25
"	"	in Queen Elizabeth Hospital	566
"	"	Sorrento Maternity Home	1,844
"	"	Heathfield Road Maternity Home	1,010
"	"	Erdington Maternity Home	285
"	"	Lordswood Maternity Home	827
"	"	Maternity Hospital	1,958
"	"	Dudley Road Hospital	3,086
"	"	Selly Oak Hospital	944
"	"	Little Bromwich Hospital	3
"	"	Women's Hospital	3
"	"	Yardley Green Road Sanatorium	1
"	"	H.M. Prison	7
			<hr/>
			12,508
			<hr/>

At the end of 1946, 118 City midwives were in practice, also 10 midwives who were used as maternity nurses. Twenty-one independent midwives were in practice (including 4 who resided outside the City). Two midwives worked under the Queen's Hospital district and 9 under the Birmingham Hospital Contributory Association. The Maternity Hospital gave up their district practices in February, 1946, and these were taken over by the City Service.

Apart from admission to institutions, 11,511 women were delivered in private houses ; 10,600 by City midwives ; 172 by midwives attached to the Queen's Hospital ; 50 by midwives attached to Birmingham Maternity Hospital prior to its inclusion in the City's domiciliary service in March, 1946 ; 542 by private midwives. There were 147 confinements attended in patients' homes or in ambulances by the Ambulance midwives.

City Midwives

During the year City midwives attended 10,600 cases, acting as maternity nurses in 1,905 of these cases. The average number of deliveries per month, per midwife, was 7.5 or 90 cases per year. This makes no allowance for 184 weeks lost by sick leave and shows an increase on the figures of 84 for 1944 and 76 for 1945. There have been 35 appointments and 27 resignations during the year.

Supervision of Midwives

During the year 1946, 386 midwives notified their intention to practise in the City. Of these, 4 resided outside the City and therefore did not come under routine inspection. Of these 386 midwives, 198 were institutional and 188 domiciliary.

Midwives sent for medical help in 3,526 cases ; for the mothers in 2,391 instances and for the child in 1,135.

Reasons for sending for Medical Help

<i>Mothers.</i>				<i>Children.</i>			
Delayed labour	.....	.....	412	Ophthalmia	.....	.....	800
Laceration of perineum	.....	1,146		Prematurity	.....	.....	34
Haemorrhage	.....	.....	172	Convulsions	.....	.....	2
Adherent placenta	.....	.....	57	Jaundice	.....	.....	33
Abnormal presentation	.....	.....	137	Skin eruptions	.....	.....	45
Abortion or miscarriage	.....	.....	37	Deformity	.....	.....	37
Rise of temperature	.....	.....	118	Other causes	.....	.....	184
Other causes	.....	.....	312				
TOTAL 2,391				TOTAL 1,135			

Midwives were temporarily suspended for the following reasons:—

Influenza	.....	.....	8	Bronchitis	.....	.....	5
Colds	.....	.....	8	Accidents	.....	.....	5
Gastro-enteritis	.....	.....	7	Septic conditions	.....	.....	3
Tonsillitis	.....	.....	5	Other causes	.....	.....	22

The following visits were paid during the year by the Supervisors of Midwives:—

Routine visits to midwives	.....	.....	.....	.....	.....	92
Special visits to midwives	.....	.....	.....	.....	.....	418
Visits to stillbirths	.....	.....	.....	.....	.....	117
Visits after neo-natal deaths	.....	.....	.....	.....	.....	125
Nursings and deliveries supervised	.....	.....	.....	.....	.....	104
Visits to ophthalmia neonatorum cases	.....	.....	.....	.....	.....	1,702
Visits to puerperal sepsis cases	.....	.....	.....	.....	.....	216
Other visits	.....	.....	.....	.....	.....	574
Unsuccessful visits	.....	.....	.....	.....	.....	614
Number of interviews with midwives	.....	.....	.....	.....	.....	987
Hospital interviews (maternity bookings)	.....	.....	.....	.....	.....	6,714
Interviews re dockets for sheets	.....	.....	.....	.....	.....	7,348

Emergency Maternity Service

This is a service whereby a doctor and nurse from the Maternity Hospital proceed to the patient's home by ambulance with equipment for the treatment of shock and hæmorrhage. One of the panel of consultants can also be summoned by the general practitioner, if he thinks it advisable.

This service was used for the domiciliary treatment of 83 City cases during 1946, the reasons being as follows:—

Post-partum hæmorrhage	.....	.....	.....	.....	.....	75 cases.
Abortion	.....	.....	.....	.....	.....	4 „
Ante-partum hæmorrhage	.....	.....	.....	.....	.....	1 case.
Secondary hæmorrhage	.....	.....	.....	.....	.....	1 „
Puerperal sepsis	.....	.....	.....	.....	.....	1 „
Eclampsia	.....	.....	.....	.....	.....	1 „
						<hr/> 83 cases. <hr/>

All cases recovered.

Gas and Air Analgesia

Number of municipal midwives with gas and air certificate	68
Number of municipal midwives for whom gas and air apparatus was available	31
Number of cases in which analgesia was administered by municipal midwives in domiciliary practice during 1946	198

Premature Baby Equipment

There are 60 premature baby outfits on the district at midwives' houses. The full equipment has been loaned out to patients in 25 instances and part equipment has been loaned in 26 instances.

Training of Midwives

The City Hospitals (Dudley Road and Selly Oak) and the City Maternity Home, 15, Wake Green Road, Moseley, together with the Birmingham Maternity Hospital, are recognised for the first period of training ; while the City Maternity Home, Heathfield Road, Handsworth, and Lordswood Maternity Home, Harborne, are recognised for the second period of training.

District Training

During the year 1946, 18 teacher midwives were taking pupils on the district. Six midwives were approved as teachers during the year and two teachers resigned.

	<i>Pupils trained for the Central Midwives Board Certificate.</i>		<i>Obtained Gas and Air Certificate.</i>
	<i>Part I.</i>	<i>Part II.</i>	
Selly Oak Hospital	27	—	—
Dudley Road Hospital	54	—	13
Birmingham Maternity Hospital	78	—	8
Sorrento Maternity Home	44	—	9
Heathfield Road Maternity Home	—	69	18
Lordswood Maternity Home	—	13	—

City Maternity Home (Sorrento), Wake Green Road, Moseley. (112 Beds).

The Home is a training school for pupil midwives (first period of training).

Including the annexe in Greenhill Road, the institution has 64 lying-in beds, 30 antenatal beds, and a premature baby unit with cots for 14 babies and beds for four mothers.

The number of deliveries in the Home during 1946 was 1,871 ; of these 1,731 were booked and 140 unbooked cases. Sixty-three per cent. were primigravidæ. Eleven cases of pyrexia were notified and five patients developed a breast abscess. There were two maternal deaths, one due to ruptured uterus and the other due to pulmonary embolism. There were no epidemics amongst the infants.

The Premature Baby Ward has been full throughout the year and, as usual, a great many infants have had to be refused admission, owing to the limited accommodation available.

City Maternity Home, Heathfield Road, Handsworth. (43 Beds).

This Home is a training school for midwives (second part of training). Including the annexe at Bourne House, the institution has 33 lying-in beds and 10 antenatal beds.

The number of deliveries in the Home during 1946 was 1,025; of these 927 were booked and 98 unbooked cases. Sixty-two per cent. were primigravidæ. Twenty cases of pyrexia were notified and one patient developed breast abscess. There were three maternal deaths, all some time after delivery and all due to tuberculosis. There have been no epidemics amongst the infants.

City Maternity Home, Lordswood Road, Harborne. (27 Beds).

This Home is primarily intended for women who have had a previous child but require institutional treatment because of home difficulties.

Antenatal and postnatal clinics in connection with this Home are held at the Harborne Welfare Centre in Wentworth Road.

There are no antenatal beds, but abnormal antenatal cases are dealt with by the Wake Green Road Home.

During 1946 there were 845 deliveries. These were all booked cases and ninety per cent. were multigravidæ.

Five cases of pyrexia were notified, and one case developed a breast abscess. There were no maternal deaths and no epidemics amongst the infants.

City Maternity Home, Highcroft Hall, Erdington. (32 Beds).

This Home was opened in May, 1946, and is primarily intended for women who have had a previous child, but require institutional care because of home difficulties.

There are no antenatal beds, but abnormal antenatal cases are dealt with by the Heathfield Road Maternity Home. Antenatal and postnatal clinics in connection with this Home are held at the Erdington Welfare Centre in Marsh Lane.

During 1946, only 16 beds have been available, owing to shortage of nursing staff. Of the 295 deliveries in 1946, 240 were multigravidæ and 55 primigravidæ. Four cases of puerperal pyrexia were notified. Forceps were applied once only and there have been two neonatal deaths and one stillbirth.

In January, 1947, an extra 16 beds were brought into use, making a total of 32 beds.

MOTHERS

	<i>Sorrento.</i>	<i>Heathfield.</i>	<i>Lordswood.</i>	<i>Erdington.</i>
No. of confinements	1,871	1,025	845	295
Booked	1,731	927	845	295
Unbooked	140	98	—	—
Primigravidae	1,183	635	81	240
Multigravidae	688	390	764	55
Puerperal pyrexia	11	22	6	4
Maternal deaths	2	3	—	—
Forceps delivery	78	49	18	1

INFANTS.

	<i>Sorrento.</i>	<i>Heathfield.</i>	<i>Lordswood.</i>	<i>Erdington.</i>
No. of births	1,921	1,049	859	296
Stillbirths :				
Booked	49	36	9	1
Unbooked	19	1	—	—
	68		37	
Deaths in first 10 days :				
Booked	28	20	5	2
Unbooked	2	6	—	—
	30		26	
Ophthalmia neonatorum	11 (none severe)	—	—	—
Septic spots	13	16	6	3
Premature births (Live and still) :				
Booked	142	86	30	4
Unbooked	36	16	—	—
	178		102	
Feeding :				
Breast entirely	1,521	755	797	282
Complemented	246	120	44	6
Artificial	47	71	4	4

CLINICS

Antenatal

	<i>Sorrento.</i>	<i>Heathfield.</i>	<i>Lordswood.</i>	<i>Erdington</i> (Clinic commenced 1st Nov., 1946).
<i>Doctors' Clinics.</i>				
New Patients	2,241	1,601	890	76
Re-visits	9,546	4,543	2,560	91
Consultation cases	674	360	—	—
<i>Midwives' Clinics</i>	564	1,845	—	—
	13,025		8,349	
			3,450	
			167	

Postnatal

New patients	1,025	456	396	3
Re-visits	282	355	69	—
Consultation cases	145	203	—	—
	1,452		1,014	
			465	
			3	

Tuberculous Cases

As in 1945, the ante-natal care of tuberculous pregnant women receiving sanatorium treatment was undertaken by the Senior Medical Officer in charge of the Maternity Homes and 30 visits were paid to 12 patients at the Sanatorium.

Inspection and Registration of Nursing Homes and Nurses' Agencies

Nursing Homes

At the end of 1946 there were 36 nursing homes on the register. Three new homes opened during the year, two for maternity, with five and six beds respectively, and the other being a home for unmarried mothers, with a total of 14 beds and accommodation for two maternity cases. Two maternity homes have registered extra beds and one home, taking both medical and surgical cases has registered four extra surgical beds. Two homes have changed ownership. Two homes were closed during the year, one of 14 beds taking both maternity and surgical cases and the other of 5 beds for chronic medical cases. Four new homes, one for maternity and three for chronic cases, are in process of registration.

The total number of visits paid to nursing homes during the year 1946 was 101 (82 by medical officers and 19 by supervisors of midwives).

Total number of beds in homes	401
Number of homes which are equipped for surgical work	4
Number of homes which take chronic or senile cases only	14
Number of homes which take maternity cases only	16*
Number of homes which keep some beds for maternity cases	3†

* with 109 beds. † with 11 beds.

Nurses' Agencies

In accordance with the Nurses' Act of 1943 and the Nurses' Agency Regulations, 1945, applications were received from six Agencies and renewals of licences were granted in each case.

HEALTH VISITORS' TRAINING COURSE, 1946-1947

The twenty-fourth course of training for the Health Visitors' Certificate commenced on Monday, 2nd September, 1946, and terminated on Wednesday, 23rd April, 1947. The examination took place in Birmingham.

The response to the advertisement for students showed an improvement. Sixty-one completed application forms were received and 25 assisted students were appointed. The number of enquiries about the course during the year 1946 was 212.

Owing to the shortage of trained health visitors, it was decided to increase the number of training places from 34 to 50. This necessitated considerable alterations in the training centre which were completed early in 1946. As the shortage of health visitors was acute in the Midland Region, it was decided to allocate the additional places among the local authorities within the region. Application from these authorities numbered 33, of whom 25 students were accepted for training.

The educational standard of some of the candidates who were already employed in health visiting or school nursing duties, was below average and extra tuition was necessary in selected cases. The increase in training places necessitated the appointment of an additional Assistant Tutor, and Miss Griffin commenced full-time duty on 7th August, 1946.

Considerable re-organisation of the theoretical and practical training has taken place. Local authorities in the Midland Region were approached to assist in the practical training of students. This varied experience has made it necessary to adjust the teaching to meet the new requirements. It is felt, that when practicable, it would be desirable for each student to be resident in a rural area for a time to take part in the varied activities and to obtain a better understanding of rural conditions as they affect the health visitor.

It is becoming very noticeable that students at the commencement of their training possess little or no knowledge of normal child development. An attempt to increase their knowledge and understanding of small children has been made by sending the students for longer periods to nurseries and nursery schools and by increasing the amount of teaching on the normal physical and mental development of the child.

Thirty-four students from the 1945-1946 course entered for the examination in April, 1946. Thirty-two were successful. The two students who failed entered for the next examination and were successful.

CHILD WELFARE SERVICE

The Work of the Health Visitor

The visited child population again shows an increase on the previous year.

<i>Year.</i>	<i>Number of visited children.</i>	<i>Number of Health Visitors engaged whole-time on Maternity and Child Welfare work.</i>
1937	66,538	90
1938	69,698	95
1939	70,289	95
1940	67,826	96
1941	65,259	97
1942	70,008	97
1943	75,310	98
1944	82,839	99
1945	86,935	98
1946	93,572	103

The increase in the visited child population during the past ten years is approximately 40 per cent. while the increase in the health visiting staff wholly engaged on this work is only 14 per cent. In addition, of the 93,572 children visited in 1946, 22.9 per cent. were born in 1946. These young infants require much more frequent visiting. Because of this heavy case load, it has been impossible to maintain the standard of routine visiting aimed at, which is as follows :—

As soon after the 14th day as possible.
 Monthly during the first year.
 Quarterly during the second year.
 Half-yearly between 2-5 years.

Even so, the total number of children visited shows an increase of 6,637 and the total number of visits paid to children under five has increased by 15,339. The increase in the number of clerks at the welfare centres has helped to ease the situation. In consequence, the average number of children per visitor per visiting session has improved, in that it has dropped from 217 in 1945 to 189 in 1946. For efficient visiting, this number should be reduced to about 80%.

Total number of visits to children under 5 years	.....	.....	.....	277,594
Total number of visits to expectant mothers	.....	.....	.....	21,554
Total number of visits postnatally following ophthalmia, stillbirths and neonatal deaths	.....	.....	.....	1,712
Total number of visits to scabies, home helps, etc.	.....	.....	.....	4,893
				<hr/>
				305,753
				<hr/>

Children Visited in 1946

Number of individual children visited	.....	.....	.....	93,572
Number of individual children who attended centres.....	.....	.....	.....	44,888
Percentage of visited children who attended centres during the year				48%

<i>Year of birth.</i>	<i>Number visited.</i>	<i>Number attended centres.</i>	<i>% attended centres.</i>
1941	<i>Attained 5 years during 1946.</i>	1,406	
4—5 years, 1942	..... 16,241	3,196	19.7
3—4 years, 1943	..... 17,942	4,618	25.7
2—3 years, 1944	..... 20,058	6,774	33.8
1—2 years, 1945	..... 17,956	12,380	68.9
0—1 years, 1946	..... 21,375	16,514	77.3
	<hr/>	<hr/>	<hr/>
	93,572	44,888	48.0
	<hr/>	<hr/>	<hr/>

Maternity and Child Welfare Centres

Number of centres provided and maintained by the Council	.....	.....	32
Total number of attendances at Child Welfare Centres during 1946:			
(1) By children under 1 year of age	.....	.....	201,899
(2) " " between 1 and 5 years of age	.....	.....	61,310

Total number of children who attended a Centre for the first time during the year and who, at the time of their first attendance, were :

(1) Under 1 year of age	.....	.....	.....	.....	.....	18,755
(2) Between 1—5 years of age	.....	.....	.....	.....	.....	2,536

Total number of individual children who attended during the year and who were at the end of the year :

(1) Under 1 year of age	.....	.....	.....	.....	.....	16,514
(2) Between 1 and 5 years of age	.....	.....	.....	.....	.....	28,564

Wordsworth Road Centre closed down on March 15th, and for the following six months the work was carried on at Floodgate Street Centre. This was the only possible arrangement, but one which caused much inconvenience to the mothers. It was, therefore, greatly appreciated when Langley Road Centre was ready for opening on September 30th.

The shortage of medical staff continued throughout the year. An average of 24 children's clinics weekly have been run by health visitors only.

The work at the centres is shown in the tables below :—

		1945.	1946.	<i>Increase or decrease.</i>
<i>Children's Attendances :</i>				
Individual children attending	.....	43,096	44,888	+1,792
Total attendances made :				
At infant clinics	.....	189,963	179,780	—10,183
At postnatal clinics	.....	54,979	60,771	+5,792
At pre-school medical inspection Clinics	.....	20,885	22,645	+1,760
Total children's attendances		265,827	263,196	—2,631
<i>Mothers' Attendances :</i>				
New mothers at antenatal clinics	.....	13,489	16,833	+3,344
Total individual women attending	.....	17,765	21,898	+4,133
Total antenatal attendances	.....	77,009	96,824	+19,815
<i>Individual Mothers examined at :</i>				
Postnatal clinics (new mothers)	.....	4,285	4,490	+205
Total postnatal examinations	.....	4,629	4,930	+301

Antenatal Clinics at Child Welfare Centres

The number of clinics held weekly was 80 with an average attendance of 23·7. The number of women attending has increased by 4,133 and the total attendances have increased by 19,815.

Antenatal Clinics

Number held	.....	.....	.....	.....	.....	4,084
New mothers attending	.....	.....	.....	.....	.....	16,833
Total attendances	.....	.....	.....	.....	.....	96,824

Antenatal clinics are also held at the City Maternity Homes, the Maternity Hospital and Dudley Road and Selly Oak Hospitals, to all of which consultation cases can be referred.

Postnatal Clinics

These clinics have proceeded as usual.

The mother is invited to attend with her baby until the infant is three months old. She receives her own physical examination between the sixth and eighth week after confinement.

The total number of primary postnatal examinations at postnatal and antenatal clinics was 4,591, an increase of 306 compared with 1945 and representing 20.9% of the total individual women attending for ante natal examination. In 1945, 24% of the women attending antenatal clinics attended for postnatal examination so that actually the 1946 total shows a drop of 3%. This is not a true index of the postnatal care, as many of the women who attended the clinics entered hospital for confinement, and would attend there for postnatal examination.

The total number of primary and re-examinations postnatally was 4,930.

The following table shows the result of these examinations :—

No. of cases showing no abnormality	.....	.....	.....	.....	1,988
No. of cases showing abnormality	.....	.....	.....	.....	2,942
% of cases showing abnormality	.....	.....	.....	.....	59.7%

Abnormal conditions found in mothers :

Breasts—mastitis	.....	.....	.....	.....	79
Genital tract	.....	.....	.....	.....	2,119
Urinary tract	.....	.....	.....	.....	104
White leg	.....	.....	.....	.....	11
General conditions	.....	.....	.....	.....	2,456
Other conditions	.....	.....	.....	.....	481

NOTE.—More than one abnormality may be found in the same mother.

<i>Postnatal Clinic Attendances</i>	1945.	1946.
Number held	1,432	1,445
Number of individual mothers examined	4,335	4,591
Total examinations made	4,629	4,930
Number of new infants attending	10,307	11,535
Total number of infant attendances	54,979	60,771
Number of infants seen by doctor	22,137	23,533
Average attendances of infants per clinic	38.4	42.0

Children's Clinics

Children of any age up to 5 years may attend these clinics, though mothers with babies under 3 months are encouraged to attend the post-natal clinics, and toddlers to attend the toddlers' inspection clinics.

Number of clinics held :	1945.	1946.
With doctor	2,543	2,439
Without doctor	932	1,023

TOTAL	3,475	3,462
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	1945.	1946.
New children attending	8,153	8,583
Total attendances	189,963	179,780
Total seen by doctor	52,343	50,244

MATERNITY AND CHILD WELFARE CENTRES, 1946

CENTRES	INFANTS AND CHILDREN				CHILDREN'S CONSULTATIONS				SPECIAL MEDICAL INSPECTIONS				MOTHERS' CONSULTATIONS (Antenatal)				POSTNATAL CLINICS					
	Births Reported	Primary Visits	Re-Visits	Total Visits	Antenatal Visits to mothers	Number Held	Fresh Children Attending	Total Attendances	Average per Consultation	Number seen by Doctor	Number Held	Total Attendances	Average per Consultation	Number of Mothers Examined	Average per Consultation	Number of Infants Attending	Average per Consultation	Number of Infants seen by Doctor	Average per Consultation			
ACOCKS GREEN	829	765	10,721	11,486	831	121	264	7,061	58	1,471	50	1,013	20	136	3	1,304	25	707	14			
BROMFORD	654	650	8,874	9,524	580	102	199	5,069	66	2,091	—	—	—	255	5	2,260	47	590	12			
CARNEGIE INSTITUTE	1230	1133	12,319	13,452	758	148	564	9,849	66	3,096	—	—	—	255	5	2,621	51	852	17			
EDINGTON	915	791	6,389	7,180	327	150	370	10,024	67	2,382	49	902	18	299	6	2,601	54	760	16			
FLOODGATE STREET	308	290	3,839	4,129	358	49	251	2,290	47	930	—	—	—	—	—	—	—	—	—			
GREET	974	1002	11,388	12,400	1,149	99	306	6,279	63	1,163	52	1,015	19	153	3	2,234	44	1046	20			
HANDSWORTH	584	568	6,084	6,652	524	100	200	5,034	50	1,108	48	1,015	19	175	4	1,843	38	824	17			
HARBORNE	613	546	6,645	7,191	493	49	250	2,955	60	1,142	—	—	—	—	—	—	—	—	—			
HAY MILLS	711	712	7,939	8,651	616	148	356	8,179	55	2,023	49	1,071	22	197	4	2,830	55	1,000	20			
HOPE STREET	908	818	11,137	11,955	908	99	265	5,197	52	1,594	48	888	12	88	2	1,935	38	741	14			
HORRELL ROAD	561	542	6,352	7,114	443	98	129	3,979	41	956	50	1,209	24	51	125	1,632	32	656	13			
IRVING STREET	490	469	5,819	6,288	398	100	438	5,066	50	2,206	23	361	16	48	—	1,477	31	667	14			
KETTLEHOUSE	527	502	6,683	7,185	396	150	308	5,597	37	1,955	48	693	12	48	—	2,644	55	1,227	25			
KING'S HEATH	785	804	5,203	6,007	445	151	359	7,717	51	2,108	80	1,254	16	51	236	2,100	41	802	16			
KINGSTANDING	571	524	6,633	7,157	616	126	158	5,318	42	1,069	51	790	16	184	3	1,996	39	827	16			
LANCASTER STREET...	796	742	10,358	11,100	996	100	269	4,714	47	1,125	48	885	18	172	4	1,983	40	682	14			
LANSDOWNE STREET	792	667	6,290	6,957	680	99	153	4,117	41	997	51	868	17	138	3	2,326	46	804	16			
LEA HALL	530	538	11,648	12,186	900	51	204	2,715	53	979	48	844	17	131	3	1,799	37	734	15			
MONUMENT ROAD	1116	1109	11,767	12,876	795	150	412	6,667	44	2,589	50	675	13	71	1	2,428	48	967	19			
NORTHFIELD...	693	672	8,286	8,958	542	99	208	5,783	58	1,232	48	908	13	171	1	1,664	37	753	14			
SEELY OAK	438	449	4,763	5,202	290	100	84	4,100	41	902	48	680	14	51	65	1,819	33	953	19			
STIRCHLEY	832	818	7,289	8,107	478	150	222	5,527	37	1,851	49	835	17	92	2	2,114	41	866	17			
STRAFORD ROAD	822	794	1,016	1,810	1,206	100	280	5,740	37	2,038	—	—	—	51	5	2,252	44	962	19			
SUTTON STREET	871	806	9,769	10,575	1,222	100	331	5,237	52	1,133	47	808	17	183	3	2,002	43	994	21			
TENNAL ROAD	—	—	—	—	—	51	71	2,483	49	1,139	50	904	18	254	5	2,114	41	866	17			
TOWER HILL	716	726	8,742	9,468	614	153	366	7,782	51	1,480	48	847	18	193	3	2,002	43	994	21			
TREAFORD LANE	772	729	8,125	8,854	570	150	375	7,962	65	2,521	59	1,172	20	65	1	1,679	33	577	11			
TRINITY ROAD	779	741	6,133	6,874	581	150	352	7,475	50	2,007	51	938	18	239	5	2,782	55	577	11			
WASHWOOD HEATH...	896	849	10,448	11,297	1,079	99	280	4,810	48	1,613	48	999	21	303	6	2,782	55	577	11			
WEOLLEY CASTLE	380	392	6,312	6,704	48	72	252	5,527	53	1,089	51	646	13	290	6	2,349	46	840	16			
WYDALLEY ROAD	981	955	13,208	14,163	1,399	73	274	4,193	47	1,089	51	561	12	159	3	1,907	37	847	17			
WYDALLEY WOOD	690	636	7,554	8,190	751	99	212	6,534	66	1,443	51	1,189	21	83	1	1,974	46	664	16			
														90	2	2,502	49	933	18			
TOTALS	22,674	21,739	247,733	269,692	21,554	3,462	8,582	179,780	52	50,244	1,294	22,635	17	4,810	3	60,771	42	23,533	16			

* Included in Harborne figures

Medical Inspection of Pre-school Children

These clinics are held for the medical inspection of pre-school children between 18 months and 5 years of age. Quarterly appointments are given and the mother is encouraged to keep these regularly. If more frequent supervision is considered desirable, the mother is advised to bring the child in the interim to the ordinary consultation.

The number of pre-school clinics held during the year was 1,294 and the average attendance was 17·5.

The following table gives an analysis of the attendances and conditions found :—

MEDICAL INSPECTIONS, 1946

Section A. Numbers :

1. No. of clinics	.....	1,294
2. Total attendances	.....	22,668
3. No. of children attending for first time this year	.....	1,506
4. No. with one or more defects	.....	6,522
5. No. with adverse environmental conditions	.....	2,567
6. No. with acute illness during year	.....	1,547

Section B. Environmental Conditions :

1. Clothing unsuitable or inadequate	.....	300
2. Rest. Bed-time later than 7 p.m.	.....	3,381
3. No day-time rest	.....	5,555

Section C. Defects :

1. Eyes :	Squint	.....	293
2.	Inflammatory conditions	.....	113
3.	Other eye conditions	.....	37
4. Skin :	Eczema	.....	172
5.	Purulent conditions	.....	134
6. Ear, Nose and Throat :	Otorrhœa	.....	202
7.	Deafness	.....	45
8.	Enlarged or diseased tonsils and/or adenoids	.....	2,324
9.	Nasal obstruction and/or mouth breathing	.....	353
10. Teeth :	Carious or defective	.....	1,353
11. Glands	.....	.....	663
12. Heart :	Congenital diseases	.....	94
13.	Rheumatic heart conditions	.....	32
14. Lungs	.....	.....	143
15. Rickets :	Active	.....	107
16.	Rachitic deformities	.....	1,154
17.	Other deformities	.....	957
18. Mentality :	(backward)	.....	95
19. Speech :	(backward or defective)	.....	182
20. Anaemia	.....	.....	147
21. Other defects	.....	.....	154

Ultra Violet Light Clinics at Child Welfare Centres

The Ultra Violet Light Clinics were held at 19 centres. The treatment was given from January to the middle of April, and began again in October.

The total number of attendances of 35,552 was made by 2,943 cases.

Remedial Exercises

During 1946 this work was carried on by Miss Nicholls, who accepted an appointment as full-time physiotherapist in January and remained until December 31st, 1946, and by two part-time physiotherapists. Exercise classes were held weekly at 11 Maternity and Child Welfare Centres, 3 Maternity Homes and Miss Nicholls spent two days each week at Canwell Babies' Hospital.

The number of children treated at the Centres during the year was :—

Individual children attending	.....	.....	.....	706
Total attendances	.....	.....	.....	5,141
Number of sessions held	.....	.....	.....	452
Average attendances per session	.....	.....	.....	11.4

Dental Treatment

	<i>Carnegie Institute</i>	<i>Stratford Road.</i>	<i>Lancaster Street.</i>	<i>Selly Oak.</i>	<i>Total.</i>
Number of clinics held	..... 264	..... 220	..... 125	..... 28	..... 637
Total attendances :					
(Mothers)	..... 4,224	..... 3,349	..... 1,831	..... 299	..... 9,703
(Children)	..... 534	..... 433	..... 313	..... 158	..... 1,438
Average attendance per session :					
(Mothers)	..... 16	..... 15	..... 15	..... 11	..... 15.2
(Children)	..... 2	..... 2	..... 2.5	..... 6	..... 2.3
Local anaesthetic administered	..... 55	..... 71	..... 38	..... —	..... 164
Gas	..... 1,598	..... 1,421	..... 932	..... 418	..... 4,369
No. of dentures supplied	..... 964	..... 680	..... 370 (To Carnegie)		..... 2,014

Mr. Payton, who had been on the staff as a whole-time dentist since 1st September, 1929, died on 19th May, 1946. He was most popular with mothers and children alike, and will be greatly missed. He was succeeded by Mr. Dyer on 1st September, 1946.

Treatment of Ear, Nose, Throat and Eye Conditions

The ear, nose and throat consultation clinic at Lancaster Street Welfare Centre was re-opened on 1st October, 1946, with Mr. Robert Evans as consultant and has been held at weekly intervals.

Number of children called	.....	.....	.....	.....	272
Number of children who attended	.....	.....	.....	.....	237
Number of children who require operation	.....	.....	.....	.....	142
Number of children referred to own Centre for observation	.....	.....	.....	.....	95
Number of children who failed to attend	.....	.....	.....	.....	35

Cases referred from Maternity and Child Welfare Centres and examined during 1946 at the Children's Hospital for the treatment of the above conditions were :—

Eye, ear and throat cases	.....	.....	.....	.....	280
Tonsils and adenoids (operations performed)	.....	.....	.....	.....	207
Tonsils and adenoids (examination only)	.....	.....	.....	.....	188
					675

Parents' Guidance Clinic

During 1946, 52 sessions were held with a total attendance of 198. Seventy-nine new patients were seen by Dr. Hammond and these included 36 boys, 32 girls, 10 mothers and 1 father and were referred for the following conditions :—

	CHILDREN	<i>No. of cases.</i>
Enuresis	21
Fears	15
Aggressive	11
Habit spasm	4
Stammering	3
Temper tantrums	3
Mentally retarded	3
Anorexia	2
Jealousy	1
Masturbating	1
Head banging	1
Sleeplessness	1
Running away	1
Extreme excitability	1

	ADULTS	<i>No. of cases.</i>
Stammering	1
Asthma	1
Acute depression	9

Four of the mothers were referred for electric shock therapy treatment and one husband serving overseas was granted compassionate posting to England. It is encouraging to find fathers demobilised from the Forces coming along with their wives and children for at least one of the consultations with Dr. Hammond.

The small library continues to be much used and appreciated.

The Provision of Dinners

The dinner centre at Monument Road was discontinued by the end of July. For a long time previously the attendances had been very poor—daily average attendance of children was 7, and of mothers less than 4.

Other Activities

Sewing Classes. The organisation of the sewing classes was taken over by the Education Department on the 16th September, 1946. The teachers will, in future, be immediately responsible to the Head of the Evening Institute of the district and their work will be supervised by the Heads of the Domestic Science Department. The Education Department will charge 2/6 per term in respect of each mother who makes a continuous attendance. In the case of mothers such as antenatal mothers, who only make one or two attendances, or mothers who make less than six attendances, a fee of 2/6 will be charged for every 6 attendances.

Classes are held at 25 centres and 11,170 attendances were recorded during the year.

Health Talks at Centres

Health talks at centres were given to 80,052 mothers. In addition, Miss Pearson gave talks to the following number of antenatal patients :—

Dudley Road Hospital	.....	2,115
Selly Oak Hospital	.....	738

Creche at Weoley Castle

An experimental creche was opened at Weoley Castle Centre on Monday, August 12th, with accommodation for 25 children. It was arranged that every mother using the creche should pay 2/6 per afternoon for each child. Eleven places were booked for the opening afternoon, but only two children arrived. Three children were the largest number attending over a period of nine weeks and for the last four sessions, no child arrived. The creche was closed on the 14th October, 1946.

Consultation Clinic

As part of the activities of the Child Health Institute, a weekly consultation clinic was opened at Carnegie Institute on April 1st, at which children referred from Welfare Centres were examined by Dr. Braid.

Clerical Assistants

It was decided in December, 1945, to extend the employment of part-time clerical assistants at Maternity and Child Welfare Centres to allow for 216 sessions per week. By the end of 1946, clerical assistants were engaged at 27 centres and have proved to be of real help in relieving the trained staff of much routine work, thus allowing more time to be spent in educational work and home visiting.

Maternity Survey

SURVEYS

At the request of the Royal College of Obstetricians and Gynæcologists and Population Investigation Committee, the Health Visitors conducted a survey during April concerning approximately 370 women who had been confined during the first week in March.

Canal Boats

In April, 1946, a report on the provision for the welfare of children and mothers living on canal boats was forwarded to the Regional Office of the Ministry of Health. The report covered 81 individual mothers, 91 children aged 0-5 years, and 97 children aged 5-15 years.

Burns Survey

Arrangements were approved in April, 1946, whereby the Almoner of the Birmingham Accident Hospital notified this Department of all cases of children under five years attending for treatment for burns or scalds. The Health Visitor for the area then telephones the Almoner to discuss the type of home care given with a view to endeavouring to obtain information concerning the possible steps which may be taken to prevent such accidents occurring.

Mrs. Colebrook has also volunteered to visit centres to give talks on the steps parents should take to prevent accidents of this nature.

Visits

Many groups of persons and individual visitors have visited the Department and various centres including the following :—

Birmingham University Social Science Students.

Selly Oak Colleges Social Science Students.

Industrial nurses.

Midwifery pupils.

Student Nurses from Queen Elizabeth and Dudley Road Hospitals.

Primary and Secondary School Boys and Girls.

Nursery Nurses (Post-graduate course).

Queen's student nurses.

Town Women's Guild.

Members of the G.T.C.

Visits were also paid to the Department by Medical Officers of Health, a visitor from the Gold Coast, a woman Member of Parliament and a woman lawyer from Turkey, one visitor from Brazil, 25 Swiss school children, a social worker from France, social workers from India, Sweden, Jamaica, Kenya, China and Trinidad.

The British Council also arranged for a visit by 17 Swiss teachers and a group of 7 Greek nurses. In addition, 3 women doctors from Holland spent a few days in the Department and other visitors came from Manchester Social Study Department, from the Public Health Department in Hackney and Old Hill.

Refresher Courses

Twenty-three Health Visitors attended refresher courses during the year.

A third " Technique of Teaching " Course was held on six Saturday mornings during February and March, when 25 Health Visitors attended.

From January to June a post certificate course for senior Health Visitors was arranged through the Extra Mural Department of the University of Birmingham. This course was intended to assist those health visitors whose work included the placing of children in foster homes and with adopting parents. It was attended by the three Child Life Protection Workers and two of the Social Workers. In addition, a number of senior health visitors from the Region attended.

Staff

The number of Health Visitors engaged wholly on Maternity and Child Welfare Work was :—

January, 1945	.....	.....	99
January, 1946	.....	.....	98
December, 1946	.....	.....	103

The average case load per visitor since 1937 was as follows :—

December, 1937	674	December, 1942	721
„ 1938	733	„ 1943	766
„ 1939	739	„ 1944	834
„ 1940	706	„ 1945	887
„ 1941	661	„ 1946	908

In January, 1946, there were five vacancies unfilled and during the year 25 other visitors left the staff for the following reasons :—

By retirement	2
For domestic reasons	5
By marriage	2
By transfer to other authorities	6
By transfer to midwifery with other authorities	1
For taking second part midwifery	2
By return to Queen's District Nursing Service	4
By transfer to Health Visiting in Malaya	1
By transfer to medical mission work	1
By transfer to Tuberculosis Department, Birmingham	1

All but seven of these vacancies were filled by ex-students remaining for the second year of their contract. This means that recently approximately 25% of the health visiting staff remain for only two years, which includes the training period. As it takes a health visitor 2-3 years to establish herself on a district, this constant change will undoubtedly have a serious effect on the quality of the work unless some way can be found to retain these younger workers.

The Home Help and Domestic Help Service

Total number of Home Helps employed	82
Number of cases attended by Home Helps during 1946	1,470
Confinements	1,329
Antenatal and postnatal cases	141
	<hr/> 1,470 <hr/>

Total number of Domestic Helpers employed	22
Number of cases dealt with by Domestic Helpers during 1946	108
(a) Where the housewife fell sick or had an operation	79
(b) With elderly people who were infirm, or one of whom suddenly fell ill	27
(c) Where the wife was suddenly called away to see her husband in hospital	2
	<hr/> 108 <hr/>

Eight Home Helps have recently become available to “sleep in,” should the necessity arise. Two confinement cases, one where the husband is employed in another city, and one where the husband has irregular hours, were able to have Resident Home Helps.

Three Home Help Training Courses have taken place during the past year.

Canwell Hall Babies' Hospital

Number of Admissions :

0—1 year	116
1—2 years	86
2—5 years	100

Total	302
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Number of Discharges :

	<i>Well.</i>	<i>Improved.</i>	<i>In status quo</i>	<i>Total</i>
<i>Discharged Home.</i>	127	88	13	228
<i>Transferred to other Hospitals</i>				32
			Total	260

Of the total number discharged, 4 were removed against medical advice ; the longest stay in hospital of those taken out against advice was 18 days.

Number of children in hospital at end of year	38
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Number of deaths in hospital during the year	4
--	---

The diagnosed cases discharged home were classified as follows :—

<i>Disease.</i>	0—1 <i>years.</i>	1—2 <i>years.</i>	2—5 <i>years.</i>	<i>Total.</i>
Debility and malnutrition	13	29	16	58
Anaemia	4	1	2	7
Marasmus	14	3	—	17
Feeding difficulties	19	—	4	23
Fat intolerance	—	1	1	2
Coeliac disease	—	3	9	12
Gastro-enteritis	6	2	1	9
Stomatitis	—	1	1	2
Tonsillitis	3	6	4	13
Otitis media	6	8	5	19
Bronchitis	16	12	12	40
Pneumonia	10	3	8	21
Tuberculosis	3	3	8	14
Pyelitis	5	1	2	8
Rickets	1	1	—	2
Pink disease	3	1	—	4
Skin conditions	4	3	4	11
Other conditions	7	3	8	18
No appreciable disease	2	3	8	13
Totals	116	84	93	293

Deaths

Classification of ages of deaths :

0—2 months.	2—6 months.	6—12 months.	1—5 years.
—	3	1	—

Causes of Death :

Gastro-enteritis and broncho-pneumonia	.....	.....	.....	.....	.....	.....	.....	.....	1
Gastro-enteritis and tuberculosis	.....	.....	.....	.....	.....	.....	.....	.....	1
Gastro-enteritis	.....	.....	.....	.....	.....	.....	.....	.....	1
Marasmus and broncho-pneumonia	.....	.....	.....	.....	.....	.....	.....	.....	1
Total									<hr/> 4

Incidences of Infectious Diseases :

Dysentery	.....	.....	.....	.....	.....	.....	.....	.....	8
Measles	.....	.....	.....	.....	.....	.....	.....	.....	9
Whooping cough	.....	.....	.....	.....	.....	.....	.....	.....	4
Diphtheria	.....	.....	.....	.....	.....	.....	.....	.....	2
Salmonella enteritis	.....	.....	.....	.....	.....	.....	.....	.....	1
Total									<hr/> 24

HEALTH EDUCATION

The work has continued steadily throughout the year, but owing to staff limitations, it has not been possible to undertake any expansion of the work. Decisions taken by the Committee at the end of the year to increase the staff will have effect in 1947. Pressure of work in district visiting and attendance at child welfare centres has made it difficult for health visitors to be released to undertake outside lectures.

Number of lectures at schools	.....	.....	.....	.....	.....	.....	.....	.....	407
Number of lectures to youth organisations	.....	.....	.....	.....	.....	.....	.....	.....	46
Number of lectures to adult groups	.....	.....	.....	.....	.....	.....	.....	.....	124
Total									<hr/> 577

NURSERIES

Day Nurseries

In December, 1945, a joint Circular from the Ministry of Health (221/45) and the Ministry of Education (75) was issued on the subject of future nursery provision.

A meeting took place between representatives from the Education Committee and the Public Health Committee, as a result of which the following recommendations were made to the City Council :—

- (1) That 15 of the existing Maycrete huttred war-time nurseries should be taken over by the Education Committee, at dates to be decided later, and converted into nursery schools.
- (2) That the remaining day nurseries controlled by the Public Health Committee should continue to operate in their present form for the immediate future, with the exception of a few placed in certain requisitioned properties, the result being a reduction to about 46 or two-thirds of the number open during the war years.

- (3) That concerning training for the National Nursery Certificate (which replaced the Diploma of the National Society of Children's Nurseries after May, 1946), both Committees would co-operate and Nurses from the Nurseries run by the Public Health Committee would be trained side by side with the Nurses from the Nursery Schools and Classes run by the Education Committee. Nurses in training would spend one year in Nurseries and one year in Nursery Schools. Before acceptance, candidates applying for training would be interviewed by representatives from both departments.

Financial Arrangements. Arrangements under which the authority's net expenditure on war-time nurseries was reimbursed from the Exchequer in full were continued till 31st March, 1946. Thereafter a special grant (54%) was made payable (as from 1st April, 1946), to Birmingham welfare authority from the Exchequer in respect of their net approved expenditure on day nurseries.

As it had been calculated that it cost approximately 35/- per week to keep a child in a day nursery, and a special block grant of 54% was now to be made to the local authority, the following scale of nursery fees was approved by the City Council and came into operation on 1st April, 1946 :—

Where the income of the family after deducting the rent is :

	per head per week	4/- per week fee.
Below 20/-				
From 20/- to 25/-	" "	"	6/- " "
" 25/- to 30/-	" "	"	8/- " "
" 30/- to 35/-	" "	"	10/- " "
" 35/- to 40/-	" "	"	12/- " "
" 40/- to 45/-	" "	"	14/- " "
" 45/- to 50/-	" "	"	16/- " "
Over 50/-	" "	"	18/- " "

The allowance for rent not to exceed £1, unless the circumstances are exceptional.

If more than one child is admitted to the nursery, the charge for the first child to be in accordance with the above scale, plus half of that charge for each subsequent child. In the case of residential nurseries, an additional charge of 3/6 per week to be made.

Staffing

The Minister of Education and the Minister of Labour and National Service agreed that appropriate members of the staff, excluding State registered and other hospital trained nurses may be transferred with such nurseries as are taken over by the Local Education Authority for use as nursery schools.

All members of the nursery staff, excluding students, were asked to indicate whether they wished to remain in the day nursery service or be transferred to the nursery school service after 1st April, 1946. Fifty-two members of the staff indicated that they wished transference to nursery schools.

Ten nursery school teachers were seconded from the Education Department, to act as Superintendents of the Wardens in the nurseries, to give lectures to the nursery students on educational subjects and to be responsible for the toddler training. They were, however, gradually recalled as nursery schools opened from 1st June, 1946. In November, two trained Infant Teachers on the nursery staff were asked to take over the supervision of the educational side of the nursery work.

Ten nurseries were closed down during 1946, while eight others (Maycrete huts), were taken over by the Education Committee as nursery schools.

As a result, by the end of the year, there were 52 nurseries open with accommodation for 2,571 children, as against accommodation for 3,845 children at the beginning of 1946.

Kitchen Arrangements

Three central kitchens continued to cater for all the day nurseries, with the exception of two, which cater for themselves. The following are the average weekly figures of meals served during 1946 :—

		<i>Bacchus Road</i>	<i>Selly Oak</i>	<i>Yardley Green</i>	
<i>Meals.</i>	<i>Kitchen.</i>	<i>Kitchen.</i>	<i>Road Kitchen.</i>	<i>Totals.</i>	
Breakfasts	2,270	2,219	2,233	6,722
Dinners	4,854	5,136	4,244	14,234
Teas	3,733	4,022	3,323	11,078
Totals	10,857	11,377	9,800	32,034

Hot Beverages :

Children	.....	7,018	8,020	5,928	20,966
Staff	.....	4,429	4,964	4,035	13,428

24-hour and Residential Nurseries

Only one 24-hour nursery has been retained, viz., that at 40, Somerset Road, which caters mostly for children of transport workers.

The following residential nurseries are in Birmingham :—

Perry Villa. Number of beds, 35. This residential nursery was opened on 1st December, 1944, for the admission of Public Health children 0-2 years, admitted through Birmingham Infirmary. There have been 177 admissions during 1946, with 139 discharges home.

There have been 22 cases of whooping cough, 79 cases of enteritis and dysentery, 11 cases of pneumonia and 1 of measles during 1946.

Pype Hayes Hall. Number of beds, 43. In January, 1945, this day and 24-hour nursery became a residential nursery for Public Health children of 0-2 years admitted through Birmingham Infirmary. There were 123 admissions throughout 1946 with 73 discharges home and 68 transfers to hospital.

There have been 10 cases of whooping cough, 18 cases of measles, 47 cases of enteritis, 9 cases of gingivitis and 6 cases of pneumonia during the year.

146, Coleshill Road. Number of beds, 22. (0-3 years). At the end of 1945, at the request of the Ministry of Health, 10 children belonging to Birmingham and displaced from certain residential nurseries in the region which had closed down, were accommodated at this nursery, the nursery being made fully residential, several day children being transferred to other nurseries. A proportion of day 24-hour children were retained. On 1st June, 1946, the day children were all transferred to other nurseries, leaving the nursery with 12 babies and 10 tweenies, 16 fully resident and six-24-hour children. Certain alterations were required to facilitate the change over.

There have been 60 admissions and 44 discharges during the year. Twenty-three children have been transferred to hospital.

There have been 12 cases of enteritis, 5 cases of bronchitis, 2 cases of pneumonia and 1 case of whooping cough.

Flint Green Nursery. Number of beds, 25. (0-2 years). This was a combined day and 24-hour nursery till 3rd June, when it became a fully residential nursery with some day children.

There were 55 admissions throughout 1946, with 31 discharges.

There have been 5 cases of chicken pox, 9 cases of enteritis, 3 cases of measles and 2 cases of gingivitis sent to hospital.

Meadway. Number of beds, 30. (2-5 years). In June, 1945, at the request of the Education Department, this nursery was made available for fully residential accommodation of Public Assistance children between 2-5 years, who were unable to be accommodated in Erdington Cottage Homes and Shenley Fields Homes, owing to the heavy demand on both. It was arranged that only short-stay children should be admitted here direct from the Assistance Officers of the various districts in Birmingham.

There have been 189 admissions and 181 discharges throughout the year.

There have been 8 cases of enteritis, 2 cases of chicken pox, 2 cases of whooping cough and 1 case of gingivitis.

The following residential nurseries are outside the City :—

Wassell Grove. Number of beds, 58.

There have been 56 admissions and 50 discharges throughout the year, with 30 transfers to hospital and 30 re-admissions from hospital.

There have been 12 cases of dysentery, 10 cases of gingivitis, 9 cases of chicken pox, 5 cases of broncho-pneumonia, and 1 case of whooping cough.

Red House, Overbury. Number of beds, 30. Owing to the distance from Birmingham, the long-stay cases are sent here. There have been 36 admissions and 37 discharges throughout the year, and the beds have been fully occupied.

There was a Sonne dysentery epidemic in February, with 11 positive swabs and 10 negative swabs though clinically positive, all nursed satisfactorily at the nursery. On the whole the general health of the children has been good.

Oaklands, Droitwich. Number of beds, 48.

There have been 84 admissions throughout the year and 47 discharges.

A small epidemic of Flexner dysentery occurred here involving 9 children—the cause of the outbreak being a nurse who was found to be a carrier. Fifteen cases of chicken pox occurred in the nursery, a child returning from holiday being the source of the outbreak.

Residential Schools

There were five residential schools on the register at the beginning of 1946, and eight inspections were made by a medical officer from this department. Two ceased admitting boarders owing to difficulty of obtaining staff. Of the three remaining schools, 1 has 35 residents with 14 under 9 years, another has 12 residents with 8 under 9 years, and the third has reduced its boarders to 5 with only 1 under 9 years.

Voluntary Homes

These homes take children for maintenance and care apart from their parents.

Church of England Children's Society Nursery, 111, Church Hill Road, Handsworth.

29 children, all resident, all between 2-5 years.

Maryvale Convent, Great Barr

67 children under 5 years. Three of these are under 1 year, but the mothers are working in the Convent. All the others are between 18 months and 5 years.

Middlemore Homes

45 children under 9 years, of whom twelve are under 5 years.

Nazareth House

97 children. Fifty-seven under 9 years, of whom 28 are between 2-5 years.

St. Philip's Catholic Home

40 children. Eighteen between 5-9 years.

Sir Josiah Mason's Orphanage

168 children. Sixty under 9 years. None under 5 years.

CARE OF THE UNMARRIED MOTHER

During the year there was a decrease in the number of cases dealt with by this department to 1,324, compared with 1,543 last year. Of these cases, 911 were unmarried mothers and 413 married women. Amongst the 911 cases, 744 were first pregnancies and 167 were multiple cases.

<i>Dealt with at :</i>	<i>First Cases</i>	<i>Multiple Cases</i>	<i>Married Women</i>
Hope Lodge	87	—	—
Woodville	39	—	—
Francis Way	23	—	—
Lyncroft House	16	2	1
Hostel	21	5	—
Homes out of city	19	6	—
Birmingham Infirmary	25	9	11
Returned to Ireland	2	—	—
Left city before confinement	14	7	10
Born out of city	28	15	24
Own home except for confinement.....	385	73	233
Own home entirely	85	50	134
	<hr/> 744	<hr/> 167	<hr/> 413

Grand Total 1,324

53 cases — mothers and babies still in the Homes	4.3%
58 cases — Babies have died and stillbirths	4.7%
73 cases — Babies have been adopted	6.0%
11 cases — Babies are with Foster Mothers	0.9%
37 cases — Mothers have married babies' fathers	3.0%
43 cases — Mothers and babies have left the City	3.5%
34 cases — Babies are in Homes without the mother	2.8%
915 cases — Mothers at home with their babies	74.8%

1,224

100.0%

Home visits paid <i>re</i> unmarried mothers	1,587
Special visits paid <i>re</i> unmarried mothers	339
Cases visited in hospitals	631
Homes inspected <i>re</i> suitable lodgings with babies	34
Special visits paid <i>re</i> V.D. cases, etc.	58
Office interviews, applications	1,075
Office interviews, other than applications	4,033
V D. Office interviews	72

Girls under age of consent :

14 years old	4
15 years old	8
16 years old	13

Summary of the 167 multiple cases dealt with in 1946 (excluding married women) :

122 had other children in their care (28 cases having more than one child)	.....	73·0%
20 first child dead	.....	12·0%
11 first child in home (Resident Nursery)	.....	6·6%
12 first child adopted	.....	7·2%
2 first child adopted by grandparents	.....	1·2%
<hr/> 167		<hr/> 100·0%

Of these 167 cases, 140 were dealt with previously by this department.

	<i>Total Illegit. imate</i>	<i>Cases dealt with by</i>								
<i>Year.</i>	<i>Births.</i>	<i>Dept.</i>	<i>2nd</i>	<i>3rd</i>	<i>4th</i>	<i>5th</i>	<i>6th</i>	<i>7th</i>	<i>8th</i>	<i>9th</i>
1946	1,529	1,324	101	25	6	2	2	2	1	1
1945	1,841	1,543	95	28	2	3	1	2	2	—
1944	1,499	1,418	79	20	9	5	—	1	1	—
1943	1,163	1,078	54	15	8	2	1	—	—	—

The following table gives details of the cases among married women :—

Adopted	.....	84
Living with putative father	.....	108
Divorced	.....	28
Husbands in Forces	.....	26
Apart from husband	.....	117
Widows	.....	50
		<hr/> 413

There were 36 cases of venereal disease and they were dealt with at the appropriate clinics.

Lodging Money Grant

The cases helped were either not eligible for the Homes, or were unsuitable.

The amount spent was	.....	£91	9	6
The amount refunded	.....	£3	5	0
		<hr/>		
Net cost	.....	£88	4	6

The number of girls helped was 38 and the average net cost per case was £2 6s. 6d.

CHILDREN'S HOME SERVICE

The Children's Home Service Scheme was closed down on 31st January, 1946.

ADOPTIONS

First enquiries re adoption	633
Applications accepted by Public Health Dept.	314
Applications to Adoption Societies	51
Applications in respect of private arrangements :	
Direct placing	81
Third party	22
Foster children adopted by foster parents	14
Applications refused, referred elsewhere, or cancelled	319

Children Placed in Homes by Public Health Department

First babies under six months	86
Illegitimate babies of married women	125
Children of a second or subsequent pregnancy	30
Older children	29
Foster children adopted by foster parents	14

Private Arrangements :

First babies of unmarried mothers under 6 months	48
Other children placed	55

<i>Total Adoption Orders granted in the City</i>	603
Number known to Public Health Department	381
(<i>Approximately 63%</i>).	

<i>Orders granted by Courts outside City of Birmingham</i>	25
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<i>Total Office Interviews</i>	3,754
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<i>Total Visits</i>	1,466
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Attendances at Children's Court	91
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Deaths : 1 Dysentery	
1 Broncho pneumonia	
2 Gastro enteritis	
1 Supra-renal haemorrhage	

<i>Inquests</i>	2
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The City Coroner was satisfied that the children had received proper care.

All children received a thorough medical examination before placement for adoption. The following was the result of the examination :—

Healthy	245
Unfit for adoption.....	2
Deferred for further investigation	8
Minor defects	123
Cases reviewed from previous years	33

CHILD LIFE PROTECTION AND FOSTER MOTHER SCHEMES

The health of the children covered by these schemes has been very satisfactory during the year, and there have been no deaths among children boarded out with foster parents.

The recruitment of new foster mothers and the holding of existing foster mothers has been greatly hampered by the increasing numbers of married women who are attracted into industry and other forms of manual work.

Applications for foster mothers	159
Applications for foster children	31
Foster mothers interviewed.....	421
Office interviews	2,571
Homes inspected	99
Homes registered	92
Foster children registered	128
Unnotified foster mothers	30
Routine visits	195
Special visits <i>re</i> foster children	587

At the end of 1946, the figures were as follows :—

Foster mothers on scheme	27
Foster mothers " non-scheme "	143
Foster children on scheme	30
Foster children " non-scheme "	101

Total foster children dealt with during 1946 :

Scheme	59
" Non-scheme "	213
Illegitimate Scheme	50
" Non-scheme "	121
Legitimate Scheme	9
" Non-scheme "	92

Foster children on Scheme who attained the age of 5 years NIL.

Foster children on Scheme who removed :

Returned to parents	10
Adopted by foster parents	8
Removals to other homes for adoption	8
Became non-scheme foster children	2
Removed to institutions	1 (Blind and M.D.)
Died	Nil

Foster children attaining the age of 9 years :—

1 child adopted by foster mother.	
1 child adopted by grandmother.	
7 children returned to mother.	
1 child adopted by father.	
Total payments to foster mothers	£1,228 5 1
Total payments by parents	£710 16 0
Cost to Public Health Committee	£517 9 1
Average cost per child, per week	6 7

CHILD HEALTH INSTITUTE

This Institute has been formed with the following objects :—

- (1) To establish a closer liaison between preventive and curative aspects of pædiatrics, with resultant benefit to the children of the City.
- (2) To improve the teaching of pædiatrics, particularly on the preventive side, to medical students and post-graduate students.
- (3) For the purpose of research.

The Council of the Child Health Institute, which has on it representatives of the University, the Children's Hospital and the City Council, held its first meeting on the 15th January, 1946. The funds for the Institute come from three sources—the University, the Children's Hospital and the City Council.

Arrangements have been made whereby medical officers employed by the local authority have access to the work at the Children's Hospital and members of the staff of the Children's Hospital obtain experience in the clinics run by the local authority. A consultation clinic is held weekly at the Carnegie Institute and is taken by a consultant physician from the Children's Hospital. The Professor of Pædiatrics visits Canwell Hospital once weekly. The services of the pathologist attached to the Children's Hospital are available at the City Maternity Homes and Canwell Hall.

Birth Control Clinics.

	<i>Dudley Road Hospital.</i>	<i>Selly Oak Hospital.</i>
(1) Number of women seeking advice :		
(a) Married women suffering from gynaecological conditions, making pregnancy detrimental to health	19	56
(b) Married women suffering from other forms of sickness detrimental to them as mothers in that child-bearing is likely seriously to endanger life	9	51
(c) Other cases not coming within the categories authorised by the Ministry of Health	9	1 (Rhesus Factor)
(2) Number of women advised in birth control methods	28	108
(3) Number in which birth control advice was given but pregnancy resulted	6	3

Notes on Birth Control Clinic at Dudley Road Hospital.

The total number of attendances at the Birth Control Clinic was 438, of which 28 were new cases accepted for advice.

Eleven patients were advised on account of recent severe pregnancy toxæmia, five due to heart disease, the remainder being for a variety of reasons.

Six patients became pregnant during the year, having been attending the Clinic for periods varying from a few months up to four years. Two failures were due to lack of precautions. In only one case has termination of pregnancy been advised and carried out.

Notes on Birth Control Clinic at Selly Oak Hospital

During the year 1946 the total attendances at the Birth Control Clinic were 452. Of these 108 cases were new cases accepted for advice, and 23 women were refused.

331 attendances were old cases attending for follow up and further supplies. Of these 3 were found to be pregnant. In one case the patient has ceased to use birth control. In the other two they stated that they had carried out the advice given and no reason for the failure could be found.

Of the new cases 10 were obstetrical cases and in 17 gynæcological reasons made pregnancy inadvisable or dangerous.

In 51 cases there were medical reasons, a large proportion had heart trouble or tuberculosis. There were 29 cases of eclampsia or toxæmia of pregnancy, where temporary birth control was advised. The majority of these had been advised to attend by this or one of the other Birmingham Hospitals.

One case of repeated stillbirth due to the Rh. factor was also given advice.

SECTION C

SANITARY CIRCUMSTANCES

Water Supply

No changes have occurred in the general water supply of the City, which has continued to be satisfactory, from the point of view both of quality and quantity. A constant supply of pure water is available from a complete network of distribution mains in all parts of the City.

The closest co-operation has been maintained with the Water Department in all aspects of the work undertaken by this Department.

Routine Sampling of Corporation Water

Routine weekly visits are paid to the waterworks at Frankley and Whitacre, and fortnightly visits to the deep wells at Longbridge and Shortheath, and appropriate samples are submitted to bacteriological investigation and chemical analysis. The deep well at Aston was abandoned as a source of supply to the City in January, 1946. At each weekly visit to Frankley and Whitacre, bacteriological samples are taken from the raw water both before and after storage, and from the treated water after filtration and chlorination. In addition, routine monthly samples are taken from the three levels of supply in the City, and a bacteriological sample is taken from the Elan Valley Aqueduct at Ludlow at fortnightly intervals.

Throughout the year, results of all samples of treated water leaving Frankley and Whitacre, have, with one exception, been entirely satisfactory. The exception occurred in October, when a very small number of *B. coli* were found in the filtered water at Frankley. Subsequent samples were normal, and there was no apparent cause for this slight degree of pollution.

The number of samples of Corporation water, including those from Ludlow, taken for examination during 1946, was :—

Chemical	.....	.....	.....	.....	.....	.....	.....	.....	117
Bacteriological	.....	.....	.....	.....	.....	.....	.....	.....	515

Pollution of Bartley Reservoir by Seagulls

Comment has been made in the last three annual reports on the pollution of Bartley Reservoir by seagulls. A few seagulls had been seen in the area during December, 1945, and in view of previous experience, chlorination was increased to 0.5 p.p.m. as a precautionary measure. At the end of January, 1946, about 300 seagulls came to roost in the water, and explosives were used to disperse them. Although the raw water samples taken from the reservoir at the beginning of February showed a heavy degree of pollution, all samples of treated water gave excellent results.

Sampling of Well Waters

There are still approximately 250 wells in the Department's Register, of which some 100 are used for drinking purposes, the premises supplied being mainly private dwellings and farms. During the year, bacteriological and chemical examinations of one well showed a high degree of pollution. On the advice of the Department, the owner arranged for a piped Corporation supply to be installed.

Routine examinations were also carried out on the well water supply to three institutions situated outside the City but under the control of the Public Health Committee, and 44 chemical and 68 bacteriological examinations were made.

Sanitary Inspection

There were 119,153 visits made during the year by the staff of sanitary inspectors. Of this total 73,280 house inspections were made for various reasons, and investigations of infectious diseases and miscellaneous complaints caused 11,856 visits.

The summonses taken out during the year were as follows :

General nuisances	.....	.....	.....	.....	.....	170
Extortionate rent	.....	.....	.....	.....	.....	13
Miscellaneous	.....	.....	.....	.....	.....	25
TOTAL						<u>208</u>

Magistrates' order was obtained in 79 instances.

Offensive Trades

There was no cause to take special action in respect of premises registered for the carrying on of offensive trades during the year.

Common Lodging Houses

At the end of the year there were thirteen registered common lodging houses in the City, affording accommodation for 744 males and 46 females. These premises have continued under regular supervision during the year.

Number of houses on register (for males only)	.....	12
Number of houses on register (for females only)	.....	1
Number of lodgers allowed	.....	790
Number of visits	.....	517

Houses Let in Lodgings

At the end of the year there were 368 houses let in lodgings on the register, containing 2,443 rooms. They were let as follows :

Number of lets of single rooms	.....	925
Number of lets of two or more rooms together	.....	597
Certified accommodation (persons)	.....	4,918

The visits and re-visits paid during the year numbered 117.

Tents, Vans and Sheds

Few complaints were received during the year concerning tents, vans and sheds, and these have mostly been dealt with by the City Surveyor under the Birmingham Corporation (General Powers) Act, 1929.

Canal Boats

The number of boats inspected on the canals within the City area was 944.

These boats were registered for the accommodation of $3,047\frac{1}{2}$ persons, and when inspected were found to be carrying persons represented in terms of adults to the number of $1,712\frac{1}{2}$.

Of the 944 boats inspected during the year it was found that 774, or 81·99 per cent. were in good condition and conforming with the Act and Regulations, while in 170, or 18·01 per cent. of the total, various contraventions were found.

Complaint notes were duly served on the owners in all cases. There were 58 contraventions outstanding at the end of 1945, and a further 287 were found during 1946. Of these, 161 were remedied during the year, leaving 184 still outstanding at the end of December.

It has not been necessary during the year to take any Court proceedings under the Act or Regulations.

The number of canal boats on the Birmingham register at the end of 1946 was 604.

Factories Act, 1937

The number of visits paid to factories with mechanical and non-mechanical power totalled 2,410. This number includes visits paid under Section 9 of the Factories Act, 1937, and advisory and routine visits in respect of work in progress as a result of the service of notices. One case of overcrowding was reported and remedied. The co-operation with the Public Works Department in regard to scrutiny of plans of new factories has resulted in several defects in sanitary accommodation being remedied at an early stage. Visits paid at the request of factory managements resulted in advice being given, among other matters, on infestation of secondhand bedding by bugs, and the infestation of a workroom by a weevil, *sitones lineatus*, entering the workroom apparently through the roof louvres.

The classification figures on the Register are as follows :—

Factories with no mechanical power	.....	.....	.....	.....	.....	1,008
Factories with mechanical power	.....	.....	.....	.....	.....	4,528

Rodent Control

Rodent control has continued on the general lines laid down in the Annual Report for 1945, investigation of complaints, the treatment of major problems and sewer maintenance treatment providing full time work for a staff of 20.

Throughout the period under review the closest co-operation has been maintained with the Divisional Rodent Officer of the Ministry of Food.

Complaints

Complaints received during the year numbered 1917—a reduction of 219 on the previous year. Zinc phosphide poison in a sausage rusk bait has continued to be the treatment of choice, and has proved very effective. Towards the end of the year a free treatment of domestic premises was instituted, but industrial premises still continue to be charged for the work done.

A summary of treatments carried out during the year under this heading is as follows :—

Number of complaints received	1,917
Number of premises treated	1,495
Number of dead rats found	1,833
Number of dead mice found	153

Materials used :

	Tons	Cwts.	Lbs.
Sausage rusk	1	17	93
Zinc phosphide	—	—	55½

Destructors

With the continued co-operation of the Salvage Department, regular inspections of the five destructors have been carried out, though it was only found necessary to treat one of them during the year. The Brookhall destructor was treated in November, 1946, when approximately 1½ cwts. of poison bait was used, with an estimated kill of 4,480 rats. Re-inspection of their premises has shown a very marked reduction in infestation, although owing to the cover provided, and the food supply available, it is practically impossible to clear this type of premises completely of rats.

Sewers

Regular maintenance treatment of the sewer system has continued, and portions of the system which previously showed a very heavy infestation are now remarkably free. The number of overground complaints received from areas served by these sewers has shown a corresponding decrease.

A summary of the work carried out during the year is as follows :

Number of manholes. Test baited	10,317
“ “ “ Poisoned	9,871

<i>Materials used.</i>	<i>Tons</i>	<i>Cwts.</i>	<i>Lbs.</i>
Sausage rusk	3	9	80
Zinc phosphide	—	1	28½

Supervision of Shops

At the commencement of the year there were two inspectors employed wholetime instead of the customary four to carry out the work of inspection in relation to the undermentioned legislation. In April three further inspectors were appointed, two commencing their duties on May 1st, the third on July 1st, to replace a retiring inspector.

Shops Act 1912.

Shops (Hours of Closing) Act 1928.

Shops Act 1934 (Employment of Young Persons, etc.).

Shops (Sunday Trading Restrictions) Act 1936.

Shops Act 1936. Private Libraries.

Butchers' Closing Order 1921.

Retail Meat Dealers' Shops (Sunday Closing) Act 1936.

Young Persons' Employment Act 1938 and various orders made under the Shops Act 1912 and 1928.

Defence Regulation 60 A.B. modifying the Shops (Hours of Closing) Act 1928 was again in operation from the beginning of the year until March 2nd, and was re-imposed from November 3rd until the end of the year.

During the war years owing to the shortage of Staff and to other duties imposed upon the inspectors available, visits to shops were reduced in frequency. In view of the many changes since 1939, it was found necessary to compile a new Register of Shops in several areas of the City.

The work of the four inspectors during the year is summarised as follows :—

Number of Visits paid :

General inspection visits	10,412
General inspection re-visits	6,284

Special Visits :

No. of streets patrolled by day (1912 Act)	1,021
No. of streets patrolled by night (1928 Act)	324
No. of streets patrolled by night (Defence Regulation 60 A.B.)	171
No. of streets patrolled by day (Sunday Trading Restriction Act, 1936)	461
Butchers' Closing Order 1921	10
Visits by day (Sunday Trading Restriction Act 1936)	934
Visits by night (Sunday Trading Restriction Act 1936)	18
Visits, Jewish Traders (Sunday Trading Restriction Act 1936)	21
Visits by night (Defence Regulations, 60 A.B.)	288
Visits (Young Persons Hours and Half-day Closing)	356
Appointments under various Acts	257

OFFENCES REPORTED, ETC.

Early closing notices not exhibited (1912 Act)	1,134
Assistants' Weekly Half Holiday notices not exhibited (1912 Act)	922
Sunday Trading Restriction Act notices not exhibited	745
Exempted Trade notices not exhibited (1912 Act)	757
Not providing seats for female assistants (1912 Act)	41
Not closing to time (half day), (1912 Act)	236
Not closing to time (evenings), (1928 Act)	66
Not closing to time (Defence Regulation 60 A.B.)	77
Young Persons Notices not exhibited, Form H (1934 Act).....	713
Young Persons Notices not exhibited, Form F (1934 Act).....	731
Not exhibiting Form K (Seating Accommodation), (1934 Act)	983
To provide W.C. accommodation (1934 Act)	16
To provide suitable ventilation (1934 Act)	5
To provide accommodation for meals (1934 Act)	6
To provide washing facilities (1934 Act)	29
Mess rooms to be cleaned (1934 Act).....	16
Nuisances reported	297
Visits to work in progress	137

During the year 223 warning letters were sent to shop-keepers contravening the undermentioned Acts :

Shops Act 1912	39
Shops (Hours of Closing) Act 1928	22
Shops Act 1934	58
Shops (Sunday Trading Restriction) Act 1936	72
Defence Regulation 60 A.B.	32

It was not found necessary to take legal proceedings as the warning letters had the desired effect.

It will be observed that the number of general inspections and re-visits made are rather higher than in previous years. The following will clarify the position :

1. It was thought advisable to re-register most of the shops, particularly the smaller type of suburban shop, and although many changes have taken place the majority of shops have no assistants and, therefore, it was not necessary to inspect the whole of the premises.
2. During the summer months it was found that owing to the shortage of goods in the shop the majority were closing to time, and it was not necessary to perform night duty as often as in former years. This allowed more time for routine inspections.
3. With regard to the re-visits it has been necessary to make more than one re-visit in some cases owing to the law stationers being unable to satisfy the demand for the various statutory forms.

It will be noticed that the number of early closing notices is rather high. This is due to the fact that although notices were exhibited before the war it was found that owing to the changes that had taken place since 1939, many notices had been either mislaid or lost.

Smoke Abatement

To carry out the basic principles required for complete combustion of raw coal the stoker of hand fired installations has to adjust his methods of firing to suit the varied consignments of fuel which he has to burn. During 1946 this was particularly noticeable in relation to open cast fuel used on boiler plants. These consignments varied in such a degree in respect of fixed carbon, volatiles and ash content that the need for skilled stokers or furnacemen with practical and theoretical training was more evident than ever, if excessive smoke emissions were to be prevented and the fuel utilized to the best advantage. Advice and demonstrations in different methods of firing to suit the type of fuel in use was given to stokers and furnacemen where necessary, and in some instances, resulted in a marked improvement in smoke emissions, especially from the chimney stacks serving small boiler plants.

A series of instructional courses for boiler and furnace firemen was held during the year at one of the technical colleges in the City, as part of an educational scheme arranged jointly by the Ministry of Fuel and Power and Institute of Fuel. This is to continue and expand, including also intermediate and senior courses, and it is to be hoped that employers will become much more widely interested in a scheme, devised originally to conserve fuel, but at the same time calculated to reduce the industrial smoke-nuisance. There is already evidence that the men thus trained show a greater efficiency in handling the poor grades of fuel at present supplied.

Fumes

The use of cellulose paint and synthetic enamel spraying apparatus has increased considerably during the year and numerous complaints have been dealt with in relation to the fumes given off during spraying operations. The most effective way of overcoming this nuisance has been by washing of the exhaust fumes, or by passing them through a coke scrubber with washing arrangements. In cases where these remedial measures have been adopted, no further complaints have been received.

Other fumes dealt with by service of notice or advisory visits have included those from the quenching of aluminium slag from melting furnaces, and from plating processes where copper cyanide solution is used in the vats.

Noise

These complaints are dealt with under Section 58, Birmingham Corporation Act 1935, and have covered noise nuisance from printing machinery, air compressors, dust extracting and refrigerator plants. To mitigate such noise nuisance, each case requires special consideration; remedy may be by removal of the offending machinery from a party wall; the introduction of insulating material to deaden the noise; or in some cases of a mechanical nature, the complete overhaul of the machinery. In most instances the managements of the industrial premises concerned have been helpful and have adopted remedial measures where practicable.

Swimming Baths

Close supervision of the following baths has been continued :—

Corporation swimming baths	.....	.....	.....	.....	.....	23
Education Department Institutions	.....	.....	.....	.....	.....	4
Private open air baths	.....	.....	.....	.....	.....	1
Orphanage and school	.....	.....	.....	.....	.....	1

With regard to the Corporation baths, 230 chemical samples and 230 bacteriological samples were taken during the year, and the results were generally very satisfactory. In 23 instances the bacterial count was rather higher than usual, and in two cases the presence of *B.coli* was detected. These adverse results were in most cases associated with a deficiency of the chlorine content of the water. The standard of 0.2 to 0.5 parts per million had, however, been attained in the great majority of the chemical samples examined.

Samples from five baths in institutions (4 educational and 1 industrial) were taken throughout the season, and of the 19 bacteriological samples, 7 gave high counts, 3 showed the presence of *B.coli*, and 2 the presence of *B.lactis aerogenes*. All these adverse results were associated with inadequate chlorination, and of the 19 chemical samples, 14 gave results below the minimum figure of 0.2 p.p.m. chlorine, and 3 gave results very considerably in excess of the maximum figure of 0.5 p.p.m. of chlorine.

One private bath was supervised during 1946 and the results of bacterial and chemical investigations were generally very satisfactory.

Louse Infestation

The numbers of cases treated at Bacchus Road Cleansing Station and Bromford Head Clinic are set out in the following table :—

	<i>Males.</i>		<i>Females.</i>		<i>Children.</i>	
	<i>Head</i>	<i>Body</i>	<i>Head</i>	<i>Body</i>	<i>Head</i>	<i>Body</i>
	<i>Lice.</i>	<i>Lice.</i>	<i>Lice.</i>	<i>Lice.</i>	<i>Lice.</i>	<i>Lice.</i>
1943	6	390	231	50	—	—
1944	3	468	182	54	—	—
1945	2	622	133	47	—	—
1946	1	574	120	42	62	34

The figures quoted above do not necessarily give a true picture of the incidence of either head or body lice infestation among the population at large. A large proportion, particularly of the male cases, came from common lodging houses and shelters, and a number of re-infestations occurred.

During the year, changes occurred in the methods used for the treatment of lousiness, and a 10% D.D.T. dusting powder has given excellent results in cases of body lice and crab lice, while a 5% D.D.T. emulsion has been used with equal success in the treatment of head lice.

Scabies

The arrangements for ascertainment and treatment, outlined in previous reports, have continued without any substantial alteration. The waning of the scabies epidemic noted last year has continued and the total annual number of treatments given at Scabies Centres dropped from 16,562 in 1945 to 14,871 in 1946, the latter figure giving an average weekly attendance of 286.

All contacts have been energetically followed up with the object of obtaining simultaneous treatment of all members of the family wherever possible, and the Scabies Order 1941 has again proved of great value in lending authority to the demand that contacts should be medically examined or treated. No legal action was taken under the provision of this Order during 1946.

The Scabies Clinic at Church Road, Yardley, was closed during December, 1946, and the premises reverted to the Education Committee, extra sessions at the Little Bromwich Scabies Clinic being arranged to accommodate patients from this area of the City previously served by the Yardley Centre. At the end of the year, eight Clinics remained in operation.

TREATMENT OF SCABIES

<i>Clinic.</i>	<i>Patients and Contacts Treated.</i>			<i>Total.</i>
	<i>Men.</i>	<i>Women.</i>	<i>Children.</i>	
Bacchus Road	869	911	727	2,507
Floodgate Street	1,763	—	66	1,829
Sheep Street	—	1,154	895	2,049
Church Road	629	898	974	2,501
(closed Dec., 1946)				
Witton	471	705	689	1,865
Chequers Walk	—	737	702	1,439
Little Bromwich	—	350	350	700
Bromford	355	464	356	1,175
Stirchley	132	277	397	806
<hr/>				
Total (1946)	4,219	5,496	5,156	14,871
Total (1945)	3,852	6,570	6,140	16,562
Total (1944)	5,519	9,588	9,158	24,265
Total (1943)	6,103	10,582	10,715	27,400

Disinfection

The following table gives details of the work done during 1946 :

Houses disinfected after scarlet fever	2
Houses disinfected after diphtheria	395
Houses disinfected after enteric fever	29
Houses disinfected after tuberculosis	1,430
Houses disinfected after cancer (on request)	57
Houses disinfected after miscellaneous diseases (on request)	2,081
Beds disinfected	868
Miscellaneous articles of clothing and bedding disinfected	11,185
Library books disinfected	341
Public conveyances disinfected	1

SECTION D

HOUSING

During the year two important steps were taken by the City Council. First, action under the Town and Country Planning Act reached the stage of a public local inquiry. Secondly, the survey of the whole of the houses in the City was completed and a separate report issued.

Both of these operations will bear fruit in due course, but in the year under record progress has necessarily been retarded by the lack of new houses, materials and labour. Considerable progress has been made in the direction of the provision of new houses and a real start has been made on a substantial programme of house building. The houses erected during the year have been of all classes, temporary, permanent traditional and permanent non-traditional types, erected by municipality and by private enterprise.

Before overcrowding can be abated and any substantial measure of slum clearance effected, new houses will be needed in considerable numbers. Here the City Council have the difficult duty of deciding upon the optimum use of labour and materials available, as between, on the one hand, the need for a new house to house a family without any accommodation at all except that in lodgings or with parents, and on the other hand the need for essential repair of existing houses, seeing that failure thus to repair may result in the loss of an existing house. It may be said with certainty that whereas £1,400 may provide one new house, that sum would provide for essential repairs to many existing houses where the conditions under which the occupying families live can be as onerous in many respects as those under which the houseless families live. In the consideration of this problem the serious deterioration of the poorer class property has had constantly to be borne in mind. Some thousands of houses, regarded as unfit for human habitation as long ago as 1938, have become decayed and dilapidated to an extent that almost beggars description. During the war it was found necessary to suspend action which would result in the making of a Demolition Order save only in those extreme cases where conditions were likely to cause positive harm to the health of the occupants and were incapable of being remedied. Most unhappily, that description may be applied now to large numbers of houses.

The Corporation have been severely hampered by the inevitable restriction of supplies. Equally, private owners, however willing, have been hindered from effecting necessary maintenance repairs. Although the more urgent dilapidations necessarily have priority, it is nevertheless a fact that, in the less urgently necessary case, a coat of paint applied now may save considerable expenditure later. This aspect of the housing problem is receiving the constant consideration of the Committees concerned, with a view to the formulation of a general policy, as to the relationship between the needs of the new and of the old houses.

Housing Act, 1936

During the year no representations were made in respect of Clearance Areas, but an important step was taken in relation to those areas lying outside the boundaries of the proposed five Re-development Areas. My report for 1945 indicated that action in respect of Clearance Areas already agreed by the City Council had been deferred. Those Clearance Areas which lie within any Re-development Area will be dealt with in the normal course of that operation. As to others, the City Council, acting on the recommendation of the Public Works Committee resolved on July 2nd, 1946, that clearance areas, in respect of which Housing Compulsory Purchase Orders had been initiated under Part III of the Housing Act 1936, be dealt with by Compulsory Purchase under Part V of the Act, thus allowing the Corporation to manage, and repair, the houses acquired until such time as alternative houses could be erected in sufficient numbers to allow for decanting and then for the demolition originally intended. The areas in question are :—

New John Street Areas (Nos. 1-5), 1939.

Wainwright Street Area, 1939.

Vyse Street (Aston) Area 1939.

The acquisition of these areas will be an operation small in relation to the re-development problem as a whole, but will be particularly beneficial by reason of the extremely bad condition of the houses involved.

Action in respect of Clearance Areas to be dealt with by Clearance Order is receiving consideration. Any future Clearance Area action will necessarily be impossible until houses in replacement are available. It is estimated that, outside the boundaries of the Redevelopment Areas, there are approximately 25,000 unfit houses within the City. It is obvious that action with a view to clearance should be undertaken at as early a date as is practicable, and will need so to be timed as to secure a correct relationship between clearance operations within the Re-development Areas and clearance operations in respect of aggregations lying outside those areas.

Individual action has necessarily been severely restricted. The following table gives particulars of such action in its several categories :—

SUMMARY OF ACTION TAKEN UNDER SECTIONS 11 AND 13 OF THE HOUSING ACT, 1936.

1. Number of dwellinghouses in respect of which Demolition Orders were made	20
2. Number of dwellinghouses demolished in pursuance of Demolition Orders	45
3. Number of dwellinghouses in respect of which Official Representations were made	37
4. Number of dwellinghouses in respect of which undertakings under Section 11 (3) were accepted :	
(a) Not to use for human habitation	6
(b) To carry out works to render fit for human habitation	Nil

Proceedings under Section 12 of the Housing Act 1936.

1. Number of parts of buildings or underground rooms in respect of which Closing Orders were made	3
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2. Number of parts of buildings or underground rooms in respect of which Closing Orders were determined, the part of the building or room having been rendered fit	1
3. Number of parts of buildings or separate tenements in respect of which Official Representations were made	6

This brings the number of houses dealt with under the individual and demolition Sections 11 and 12 of the Housing Act, 1936, since September, 1939 to a total of 372 houses. Certain houses, to a total of 67, previously regarded as unfit for human habitation or included in Housing Compulsory Purchase Orders as “grey” properties were re-occupied during the war years, after the execution of works on a limited scale, under the authority of the Ministry of Health Circulars 2845 and 2871. No further houses were so re-occupied during 1946. Another continued war-time provision, Defence Regulation 68 A.A., authorises the issue of licences to enable houses, on which Demolition or Clearance Orders were in operation, to be used for human habitation despite the prohibition contained in Section 155 (3) of the Housing Act, 1936. These licences, for six monthly periods only, covered 11 houses up to the end of 1945. Constant review has taken place, and at the end of 1946 two houses were thus occupied under licence.

Town and Country Planning Act 1944—Re-development

The report of the Public Works Committee referred to in my report for 1945 resulted in a public enquiry, held in July, 1946, by the Minister of Town and Country Planning into the “Birmingham (Central Re-development) Compulsory Purchase Order 1946,” covering five areas for re-development under Section 9 of the Town and Country Planning Act 1944, as the best means of dealing satisfactorily with conditions of bad layout and obsolete development and for re-allocating population or industry.

If the Orders submitted by the Council are approved, either wholly or in substantial part, the effect will be that ultimately the whole of the affected properties will either be controlled or developed in accordance with the schemes made by the Local Authority. The properties will be vested in the Corporation, who will have power to manage them prior to development, to carry out repairs and, where appropriate, to improve the houses not likely to be demolished in the earlier stages of the scheme. A substantial improvement in conditions should be effected by such management by the Corporation of those houses taken over under the operation of vesting orders or by agreement. Much will depend upon the availability of resources. At present it seems likely that these will not be sufficient to enable substantial amendments to be carried out for a year or two and that the Corporation, on assuming control, may be able only to carry out a modified scheme of repairs and improvements varying in calibre only slightly in the first instance according to the prospective life of the unfit houses concerned. Such action will nevertheless result in an amelioration of the lot of the large numbers of tenants who are living in conditions of the greatest difficulty.

In preparation for the Order substantial progress has been made in setting up an organisation to deal with re-development. Constant liaison has been maintained between the Public Works, Estates and Health Departments, and a Standing Committee has been established by the City Council, the Central Areas Management Committee, to be entrusted with the duty of management, repair and collection of rents of all properties which may pass to the ownership of the Corporation by virtue of vesting declarations in the Order now awaited, until such time as those properties are required to be pulled down, altered or used for the purpose of re-development. It is hoped that these arrangements will make for more expeditious repairs.

New Houses

During the year 963 traditional type houses were built, 550 by private enterprise and 413 by the Corporation ; in addition 1,475 temporary houses were erected by the Government in pursuance of the National Scheme for meeting the immediate housing need. I am indebted to the City Engineer and Surveyor for these figures, and also for the fuller information covering the period since the end of the last war, set out below :

<i>Year</i>	<i>NUMBER OF HOUSES ERECTED</i>		<i>Government</i>	<i>Total</i>
	<i>By Private enterprise</i>	<i>By the Corporation</i>	<i>Temporary Bungalows</i>	
1919	29	—	—	29
1920	244	553	—	797
1921	426	970	—	1,396
1922	382	810	—	1,192
1923	556	1,621	—	2,177
1924	1,201	2,004	—	3,205
1925	1,774	3,215	—	4,989
1926	1,775	5,159	—	6,934
1927	2,445	4,007	—	6,452
1928	1,487	3,505	—	4,992
1929	2,456	4,359	—	6,815
1930	1,738	6,687	—	8,425
1931	1,983	3,893	—	5,876
1932	2,159	1,703	—	3,862
1933	3,028	2,029	—	5,057
1934	4,226	837	—	5,063
1935	6,265	985	—	7,250
1936	6,926	2,285	—	9,211
1937	7,662	2,643	—	10,305
1938	7,804	3,003	—	10,807
1939	5,178	1,413	—	6,591
1940	1,183	302	—	1,485
1941	181	10	—	191
1942	26	63	—	89
1943	5	35	—	40
1944	37	2	—	39
1945	25	6	325	356
1946	550	413	1,475	2,438
	<hr/> 61,751	<hr/> 52,512	<hr/> 1,800	<hr/> 116,063

Housing Survey and Overcrowding

A report on the results of the Housing Survey of Birmingham undertaken during the year in pursuance of the instructions of the City Council was issued to members of the Council at their meeting on 6th May, 1947. Although the whole of the report is of significance in assessment of the housing position in the wider sense, certain particulars may appropriately be quoted here. In bare outline the specific information sought under City Council Resolution is as follows :—

(a)	The number of houses in the City	283,611
(b)	The number of family units resident therein	299,144
(c)	The number of back-to-back houses	29,182
(d)	The number of houses without separate water supply	6,429
(e)	The number of houses without gas or electricity supply	417
(f)	The number of houses without separate water closet accommodation	34,965
(g)	The number of houses without bathroom accommodation	142,523
(h)	Degree of overcrowding :	
	(i) Under the standards of the Housing Act, 1936 1·92%	(5,754)
	(ii) Not including livingrooms for sleeping purposes 11·26%	(33,682)

The population obtained by enumeration of successive habitations from time to time over a period of some months worked out at 1,016,995 ; for the purpose of comparison the estimate of the Registrar-General for 30th June, 1946, is 1,044,600.

The population per occupied dwelling has diminished since the last war as follows :—

1921. 4·83 persons per occupied dwelling.

1931. 4·2 persons per occupied dwelling.

Housing Survey, 1946. 3·6 persons per occupied dwelling.

This diminution affords some statistical evidence of the bulk effect of the reduction in overcrowding disclosed by the survey ; but it also indicates that proportionately a greater number of houses is now needed than was necessary to accommodate the same population in 1921.

The ascertainment of several types of defect provided for the first time an accurate record of aspects of housing conditions intolerable on present day standards, but unfortunately forming a legacy from the times when standards were lower, or when no standards existed. Birmingham is not notorious as a City with a substantial proportion of back-to-back houses, but the number quoted above indicates clearly that large scale action is necessary. As the back-to-back houses in Birmingham do not lend themselves easily to satisfactory schemes of amendment it may be said that they form the hard core of the slum clearance problem in the City.

Overcrowding, as one of the principal subjects included in the terms of reference, is dealt with at some length in the report. That the standard set out in the Housing Act, 1936, is inadequate is well established. Even

the standard of overcrowding adopted in item (h) (ii) above does not attain the highest standard claimed by those members of the City Council who urged that a child be considered as a full unit, instead of as half a unit if between 1 and 10 years of age, and as nil if under 1 year. That standard, applied so as not to count the living room as a sleeping room, would yield a figure of 21·7% overcrowding, which may be compared with the results quoted in (h) (i) and (ii) above.

The decrease in overcrowding, as assessed by the Housing Act standard, since the previous survey in 1936 was most marked in the central wards, presumably as a result, in part, of statutory housing activities and in part of the centrifugal movement of families during air raids. Against this reduction must be offset the observations of the staff actually engaged in the survey that, although the number of cases of overcrowding may have diminished, there is no diminution in the gravity of the individual bad cases recorded. Further, overcrowding is not peculiar to any one class of dwelling and is, in fact, higher in municipal houses than in the City as a whole. (5·40% as compared with 1·92%).

Whilst the gravest cases of overcrowding have been referred to the Estates Department for special consideration, the allocation of houses is generally governed by the scheme approved by the City Council, and known as the points system. Under this system overcrowding is only one of a number of factors justifying the allocation of points, houses being allotted in strict rotation to cases with the highest aggregate number of points.

The results of the survey were not dealt with by the City Council during 1946, but it is hoped that in the report for 1947 it will be possible to include reference to the decisions of the Public Works Committee, who deal with the provision of new houses, and of the Estates Committee who deal with applicants for municipal accommodation.

SECTION E

INSPECTION AND SUPERVISION OF FOOD

Food Premises

There are 755 food premises on the register.

Inspection under Section 13 of the Food and Drugs Act, 1938, has continued, and where defects have been found, remedy has been effected without recourse to prosecution.

An arrangement by which the City Surveyor transmits plans of extension and new construction of such premises, for scrutiny from a sanitary point of view, has been found most valuable, in that many defects may thus be prevented, with consequent reduction of health risk, and at the same time saving of cost.

Ice Cream

Sustained systematic inspection and supervision of all ice cream manufacturers and vendors was maintained during the year. The smaller number of samples taken during 1946 as compared with 1945 was due to the shortage of staff during the ice cream making season.

The industry generally has again shown its willingness to co-operate with the Department. Owing to shortages, however, wholesale manufacturers were still unable to market all their products in the wrapped state. During the year many cases have occurred where the occupier has been unable to comply with the requirements of the Department, and has overcome the difficulty by the re-allocation of manufacturing materials to one of the larger makers, to be made up and re-supplied in the finished form, the premises being then registered for the retail sale of ice cream only.

Number of registered, unregistered and proposed ice cream manufacturing premises visited	422
Premises found unregistered	10
Premises unsuitable for registration for manufacture	32
New premises erected	13
Premises in course of erection or awaiting sanction	3
New premises to be provided	13
Alterations to registered manufacturing premises	7
Alterations to unregistered manufacturing premises	7
Premises where sterilising facilities were required	5
Premises with minor sanitary defects	3
Samples taken for chemical analysis	38
Samples taken for bacteriological investigation	41

In five cases new premises would have been erected if permits for materials had been granted by the Ministry of Supply.

The results of chemical analyses were as follows :—

<i>No. of Samples.</i>	<i>Fat %</i>	<i>No. of Samples.</i>	<i>Solids-not-Fat %</i>
5	Nil	2	Under 15
11	0—2	10	15—20
16	2—4	15	20—25
1	4—8	9	25—30
3	8—10	2	30—35
2	10+		

Of the 38 samples examined, 24 contained starch.

The reports upon samples taken for bacteriological investigation showed the following results :—

<i>No. of Samples.</i>	<i>Bacterial Count.</i>	<i>No. of Samples.</i>	<i>Coliform Organisms Present.</i>
1	None present	12	Nil
2	1 to 1,000	5	Under 10
16	1,000 to 10,000	10	10 to 100
11	10,000 to 100,000	7	100 to 1,000
7	100,000 to 500,000	7	Over 1,000
4	Over 500,000		

While in no instance was ice cream produced in the City found to be responsible for any outbreak of intestinal infection, the continuance of sale of unwrapped ice cream, and particularly cold mix ice cream, from street barrows, must be regarded as a grave risk to health.

Milk and Dairies

Important structural improvements and extensions to three large dairies have been in progress, but considerable delay and difficulty has been experienced by the firms concerned in obtaining licences for the necessary materials for the completion of the work. It is, moreover, still exceedingly difficult to obtain new processing plant to replace that which is worn out. The standard of milk sold, however, has been well maintained.

Routine inspection and sampling under the Milk and Dairies and Milk (Special Designations) Orders were carried out and samples of milk sold in the City from plants approved by the Ministry of Food for the production of heat-treated milk were also taken throughout the year.

Forty-four complaints in respect of milk were received and investigated during the year, as compared with 64 in 1945. These may be classified as follows :—

Dirty bottles	16
Foreign matter in bottles	9
Souring	15
Overcooked sterilised	4

The problem of dirty bottles continues to be a serious one, and is not attributable so much to defective washing equipment as to two other causes which should both be capable of correction. Firstly, the average condition in which bottles are returned by the domestic user and by schools leaves much to be desired, and no bottle-washing machine can be expected to clean them satisfactorily. Secondly, the practice of roundsmen in dumping crates of empties at the roadside for subsequent collection by one of the firm's lorries allows accumulations of road dust and other filth to gain access to the bottles, so that those which are already filthy become even more difficult to cleanse. This puts an undue strain on the employee checking bottles as they leave the bottle-washer ; and even with a conscientious employee dirty bottles must frequently be missed.

The other main complaint is of souring, and is largely attributable to the age and condition of bulk raw milk supplies sent in by tanker from outside. This tanker milk represents about 25% of the total. Such milk always proves to have been many hours on the road, frequently stopping overnight in garages en route so that effective pasteurisation is not to be guaranteed. When such milk is wholesaled to another retailer after heat treatment, and then sent to a branch retailer, it is inevitably past its best and its keeping qualities inadequate. Of 19 samples of tanker milk submitted to bacteriological examination in December, on arrival at the dairy, only 3 proved satisfactory, and these had been heat treated before despatch. It should be noted that these samples were taken in cold weather, giving the milk every advantage.

Milk and Dairies Administration

	1944.	1945.	1946.
Number of wholesale purveyors	62	63	61
Number of retail purveyors	167	161	139
Number of milkshops	1,776	1,772	85
Number of bottled milk purveyors	4,309	4,316	2,841

Milk (Special Designations) Regulations, 1936-41

Principal Licences.

Producers of tuberculin tested milk	2
Dealers in tuberculin tested milk	19
Producers of accredited milk	18
Dealers in accredited milk	8
Producers of pasteurised milk (Holder process)	8
Producers of pasteurised milk (H.T.S.T. process)	6
Dealers in pasteurised milk	53

Supplementary Licences

Dealers in tuberculin tested milk	8
Dealers in accredited milk	4
Dealers in pasteurised milk	2
TOTAL	128

778 samples of these designated milks were taken. 5·1% failed by reason of the presence of B.coli. 2·2% failed in the methylene blue test, and in the case of pasteurised milks 0·8% failed to pass the phosphatase test.

Synthetic Cream

Routine sampling of synthetic cream received at bakeries from the suppliers to the area showed the following results :—

<i>Bacterial Count.</i>	<i>No. of Samples.</i>	<i>B.coli present per 1 c.c.</i>	<i>No. of Samples.</i>
Nil	18	Nil	74
Under 1,000	34	Under 10	4
1,000 to 10,000	22	10 to 100	3
10,000 to 100,000	4	100 to 1,000	3
100,000 to 500,000	—	Over 1,000	—
Over 500,000	5		

No instance of infection caused by consumption of contaminated synthetic cream was reported during the year.

The Inspection of Cows and Cowsheds within the City Area

Extracts from Report by MR. C. G. ALLEN, M.R.C.V.S., Chief Veterinary Officer.

City Dairies

At the end of 1946 there were forty-six dairy farms housing 774 milch cows in 102 registered sheds in the City area.

The Milk and Dairies Order requires the registration of cowkeepers and enforcement of general requirements as to structure and cleanliness of cowsheds, and for this purpose a monthly inspection is made of all City cowsheds ; and, in addition, all cows in City dairies are examined.

Dairy Herds

Despite shortage of labour, and other war conditions, the health and cleanliness of the cows in City dairies remains good. The cows are regularly examined, with a view to preventing danger to health from the sale of infected, contaminated or dirty milk, and in particular, for prohibiting the supply or sale of milk suspected of being infected with tuberculosis.

Mastitis

During the year 22 cows were found to be affected with acute catarrhal mastitis, and the milk produced from these cows was prohibited from sale.

Tuberculosis

In addition to the clinical examination of the dairy cows, bulk samples of milk were taken from each City dairy herd during the year, and individual samples from suspected cows.

	<i>Taken.</i>	<i>Infected.</i>
Mixed samples from dairy herds	71	6
Individual samples	13	2

As a result of clinical examination, four cows affected with tuberculosis were removed from the City dairy herds during the year and dealt with under the Tuberculosis Order.

In addition, at the request of the Ministry of Agriculture and Fisheries, post mortem examinations were made on nineteen cows dealt with under the Tuberculosis Order and sent to the City Meat Market from farms outside the City.

Inspection of Cowsheds

Regular inspection has been maintained of all registered cowsheds, attention being paid to the provisions of the Milk and Dairies Order for securing adequate lighting, ventilation and a clean water supply, also the cleansing of cowsheds and removal of dung and offensive matter.

In spite of labour shortage all cowsheds have been limewashed or sprayed with lime at least twice during the year.

Milk and Dairies (Consolidation) Act, 1915

In connection with the ascertainment of the source of supply of milk, the consumption of which is likely to cause tuberculosis, notification under Section 4 of this Act was sent in 128 cases to the Medical Officer of Health for the county or county borough in which the cows yielding the milk were kept.

Comparative Return

The following table shows the number of samples of milk, sent in from outside sources, taken during the past ten years and the percentage infected with tuberculosis :

Year.	Samples Taken.	Samples Infected.	Percentage Infected.
1937	2,267	232	10·2
1938	2,386	208	8·7
1939	1,867	173	9·3
1940	2,237	244	10·9
1941	2,377	189	8·0
1942	2,408	182	7·5
1943	2,456	146	5·9
1944	2,434	138	5·7
1945	2,396	122	5·1
1946	2,232	128	5·7
AVERAGE FOR PERIOD			7·6

Tuberculin Testing of Herds belonging to Corporation Institutions

The following return gives the number of animals tested during the year :—

	Tested.	Passed.	Failed.
1	164	162	2
2	147	147	—
3	124	124	—

Inspection of Meat and Other Foods

Under the Livestock (Restriction on Slaughtering) Order, 1940, the slaughtering of cattle, sheep and a certain number of pigs, carried out in Birmingham is concentrated at the Public Abattoir. In addition to that centre there are twelve private slaughterhouses attached to bacon factories in the City for the slaughter of pigs. Prior to the Ministry of Food's control of slaughtering there were 83 private slaughterhouses in use.

For the purposes of the inspection of meat in the Public Abattoir and in the bacon factories, there are employed five Veterinary Meat Inspectors and three Food Inspectors. The food inspection in the shops, and food stores in the City is carried out by eight District Inspectors. There is also one Inspector employed in the Wholesale Fruit, Vegetable and Fish Markets.

Under the present procedure, whereby the Ministry of Food take control of slaughtering, the local authority continue meat inspection and inspection of slaughtering, as carried out prior to the change.

Inspection of Meat, Fish and Other Foods at Corporation Hospitals, Institutions, British Restaurants, etc.

The premises visited include :—

Institutions, etc.	33
School Meal Centres	90
British Restaurants	42
	<hr/>
	165

1,861 visits of inspection were made during the year to the above premises. In cases where food supplies and storage conditions were found to be unsatisfactory at school meal centres, reports were sent to the School Meal Section, Civic Centre, and reports relating to food inspected at British Restaurants were sent to the Administrative Officer, British Restaurant Department, Civic Centre.

Shellfish

During the year, 22 samples of shellfish were taken for bacteriological examination. Of these, all were satisfactory, except one consignment of mussels, which was condemned.

Registered Premises used for the Manufacture of Cooked and Potted Meats.

During the year an allocation of manufacturing meat was made to retail butchers, and many of them now wish to manufacture sausages and cooked meats on their premises. In many cases this has necessitated certain alterations to premises and when these have been completed to the satisfaction of the Veterinary and Public Health Departments, the premises are registered. Altogether registration of premises which have been altered to comply with the regulation was carried out in 36 cases during 1946.

At the end of the year there were 244 food preparation premises on the register as follows :—

Sausages, cooked meat and pork pie manufacturers	.....	.....	.....	242
Jam manufacturers	.....	.....	.....	2
				<hr/>
				244
				<hr/>

Retail Shops

The following retail food shops were visited by Inspectors of the Department.

Beef and pork butchers	.....	.....	.....	.....	1,020
Grocers	.....	.....	.....	.....	1,512
Greengrocers	.....	.....	.....	.....	1,274
Hucksters	.....	.....	.....	.....	4,164
Fish friers	.....	.....	.....	.....	429
Fishmongers	.....	.....	.....	.....	630
Horseflesh	.....	.....	.....	.....	1
					<hr/>
TOTAL	.....	.....	.....	.....	9,030
					<hr/>

SECTION F

PREVALENCE OF, AND CONTROL OVER INFECTIOUS AND OTHER DISEASES

GENERAL

The mortality figures for 1946 are set out below and compared with the decennial (1936-1945) averages in the statement following :

<i>Disease.</i>	<i>Number of deaths.</i>	<i>Deaths in 1946 above or below the average for 1936-45.</i>
Enteric fever	1	— 1
Smallpox	—	—
Measles	9	— 16
Scarlet fever	—	— 4
Whooping cough	33	— 29
Diphtheria	9	— 44
Pulmonary tuberculosis	616	—122
Other forms of tuberculosis	73	— 5
Influenza	108	— 77
Cerebro-spinal fever	5	— 27

The prevalence of the notifiable diseases is shown in the next table :

<i>Disease.</i>	<i>Number of Cases.</i>	<i>Cases noti- fied in 1946 above or below the average for 1936-45</i>
Enteric fever	16	— 15
Smallpox	—	—
Scarlet fever	1447	—679
Diphtheria	323	—683
Erysipelas	299	—155
Puerperal pyrexia	311	— 26
Ophthalmia neonatorum	811	—188
Pulmonary tuberculosis	1135	+117
Other forms of tuberculosis	165	— 1
Acute primary or influenzal pneumonia	1584	—300
Cerebro-spinal fever	73	— 52
Acute poliomyelitis	25	+ 12
Polioencephalitis	1	—
Encephalitis lethargica	9	— 1
Malaria	32	+ 27
Dysentery	263	+160

The cases of cerebro-spinal fever were 5 fewer than those of the previous year (73 against 78), and the deaths fell from 13 to 5.

Diphtheria was less prevalent than during 1945, the intermediate type predominating; with a fall in case mortality from 4.0 per cent. in 1945 to 2.8 per cent. in 1946.

Notifications of pulmonary tuberculosis decreased by 58, non-pulmonary cases increased by 10, compared with 1945.

The apparent prevalence of "ophthalmia neonatorum" is illusory; only a trivial proportion are due to gonococcal infection. The great majority represent merely a precautionary notification of even the slightest condition capable of coming within the elastic definition of ophthalmia of the newly-born.

Enteric Fever

There were 27 cases notified as enteric fever, and of these 11 proved negative.

Undulant Fever

No cases of undulant fever came to the notice of the Department during the year.

Glandular Fever

No cases of this disease came to the notice of the Department during the year 1946.

Smallpox

There were no cases of smallpox in the City during the year.

Vaccination

Following are tabulated statistics relating to this work for the current year, together with similar figures relating to each year since 1937.

	1946.	1945.	1944	1943	1942.	1941.	1940.	1939.	1938.	1937.
Conscientious objectors per cent. of total births	18.9	19.6	20.3	18.9	21.2	22.6	27.5	31.2	31.8	31.2
Successful vaccinations	66.3	67.0	66.2	65.2	59.9	51.2	49.9	52.9	52.6	51.9
Percentage of survivors										
Insusceptible	0.5	0.5	0.6	0.9	0.6	0.8	0.4	0.5	0.6	0.3
Postponed by medical certificate	0.3	0.2	0.3	0.3	0.4	0.4	0.6	0.4	0.3	0.3
Removed	4.6	4.4	3.8	4.0	4.4	5.3	4.3	3.9	3.9	3.8
Lost sight of	2.1	1.8	1.9	2.9	3.8	7.4	5.0	3.5	3.2	3.5
Still under notice	6.4	5.7	6.0	6.8	8.5	10.9	10.9	6.1	5.9	7.3

Measles

During the year 490 cases were admitted to Little Bromwich Hospital for treatment, and the total number of deaths was 9.

Immunisation by pooled adult serum has been carried out as before the number of inoculations carried out by general practitioners being 31, of which 20 were for attenuation and 11 for prevention. In addition, 79 doses of serum were supplied for use in institutions under the control of the Health Committee.

Scarlet Fever

The number of cases notified were 258 less than in 1945 ; and there were no deaths from this disease.

As in previous years, cases were treated in hospital where home conditions made this advisable ; otherwise they were treated at home.

The report on cases treated at the Infectious Diseases Hospital will be found on page 92.

Whooping Cough

During the year 714 cases were admitted to the Infectious Diseases Hospital, and the total number of deaths from this disease was 33.

Where appropriate the services of a district nurse are supplied under an arrangement made with the District Nursing Association.

Diphtheria

The total number of cases notified was again markedly lower than in the previous year, and the cases confirmed in diagnosis also showed a considerable reduction, as did the case mortality :—

DIPHTHERIA CASE MORTALITY						<i>Case Mortality per cent.</i>
1901-10 (average)	.....	.....	.....	.....	.....	14.1
1911-20 ,,	.....	.....	.....	.....	.....	13.6
1921-30 ,,	.....	.....	.....	.....	.....	5.8
1931-40 ,,	.....	.....	.....	.....	.....	6.5
1936	.....	.....	.....	.....	.....	5.5
1937	.....	.....	.....	.....	.....	5.9
1938	.....	.....	.....	.....	.....	6.5
1939	.....	.....	.....	.....	.....	7.3
1940	.....	.....	.....	.....	.....	6.0
1941	.....	.....	.....	.....	.....	6.0
1942	.....	.....	.....	.....	.....	4.2
1943	.....	.....	.....	.....	.....	3.7
1944	.....	.....	.....	.....	.....	2.7
1945	.....	.....	.....	.....	.....	4.0
1946	.....	.....	.....	.....	.....	2.8

A report on the cases treated at the Infectious Diseases Hospital will be found on page 90.

Diphtheria Anti-toxin

Diphtheria anti-toxin is distributed free of charge to medical practitioners for the treatment of their patients, and can be obtained from the Public Health Department, the Bacteriological Laboratory, and eighteen police stations.

Immunisation against Diphtheria

The total number of children who received a full course of A.P.T. through the Public Health Department in 1946 was 21,450.

Children under 5 years of age immunised by the Public Health Department Staff.....	15,222	Total under 5 years— 17,767	Total 0-15 years of age 21,450
Children under 5 years of age immunised by General Practitioners with material supplied free by the Public Health Department	2,545		
Children from 5 to 15 years of age immunised by the Public Health Department Staff	3,481	Total 5-15 years : 3,683	
Children from 5 to 15 years of age immunised by General Practitioners with material sup- plied free by the Public Health Department	202		

In addition, 63 adolescents and adults were inoculated with T.A.F., mostly nursery staff, but including a few adults who were going to Europe or America.

12,049 supplementary doses of A.P.T., including 210 by general practitioners, were given to children previously inoculated. Most of this work was carried out in the schools, the age grouping being as follows :—

Under 5 years of age	225
5-10 years of age	11,312
Over 10 years of age	478
15 years of age and upwards (mainly nursery staff)	34

This supplementary dose is offered for children of all ages if the parents desire it, although the Department is concentrating on children from 4 to 7 years of age.

Routine visits to child welfare centres, nurseries, nursery schools, primary schools and institutions were made and material supplied free of charge to general practitioners.

A table prepared annually of the percentage of immunised children from 8 months to 5 years of age in each health visiting district shows six child welfare centres with between 80% and 90%, thirteen centres with between 70% and 80%, ten centres with between 60% and 70%, and two centres with between 50% and 60% immunised, giving a total of 72·3% of the visited children between 8 months and 5 years of age. These figures are corrected for migrations and deaths.

Taking into consideration the children not visited by the Department and institution children, it is estimated that 70% of the pre-school children had been inoculated. It is estimated that some 91% of the children between 5 and 15 years of age have been inoculated, but it is not possible to correct this group to any extent for migrations and deaths. These losses are, however, considered to be balanced by the children coming into the City who have already been inoculated elsewhere.

It has always been customary in Birmingham for each health visitor to be responsible for obtaining consents for immunisation on her own district, helped by special letters sent to the parents from the central office and by leaflets, talks, etc., at the Centres.

A regular immunisation session at fortnightly intervals at all Centres, except four small ones where the interval is four weeks, makes it easy for mothers to attend at a time and place convenient for themselves. They can attend with or without appointment and may, if they wish, bring children of school age for primary or supplementary treatment although, with the exception of newcomers to the City, there is little need for this, as the schools are visited at least once a year and nursery schools and classes as required.

There were nine deaths from diphtheria during the year—five children under 5 years of age, two children between 5 and 15 years of age, and two adults. Of the children under 5 years, two of these had been inoculated; but one must be ignored from this aspect, as inoculation had been completed only six weeks previously.

Boy—3 years :

0·2 c.c. A.P.T.—May, 1944

0·5 c.c. A.P.T.—June, 1944

At 8 months of age

The boy developed a laryngeal cough and the doctor was not called in until the fifth day, when the patient was sent into hospital. He had a mild faucial and a laryngeal diphtheria and died shortly after admission. The post mortem examination showed respiratory obstruction and collapse of the lung.

DIPHTHERIA IMMUNISATION DEPARTMENT

NUMBER OF CHILDREN WHO HAD COMPLETED A FULL COURSE OF IMMUNISATION AT ANY TIME UP TO 31ST DECEMBER, 1946

Year of Birth	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	Total
Fully Immunised Children	1,497	15,996	21,057	15,420	13,259	13,338	15,458	15,308	15,246	14,131	12,447	11,881	11,184	11,993	12,436	200,651
Transfers Out	24	348	347	255	184	78	5	1	—	2	—	1	—	—	—	1,245
Transfers In	1,473	15,648	20,710	15,165	13,075	13,260	15,453	15,307	15,246	14,129	12,447	11,880	11,184	11,993	12,436	199,406
TOTALS	1,474	15,680	20,758	15,191	13,096	13,272	15,468	15,319	15,253	14,149	12,468	11,917	11,211	12,027	12,463	199,746
	66,199			133,547												

Dysentery

Three hundred and thirty cases were notified during the year, but on investigation 67 of these proved not to be dysentery, making a net total of 263 clinical cases.

Malaria

Thirty-two cases of malaria were reported during the year, all contracted abroad, and including some Service cases.

Food Poisoning

During the year under review 193 cases of food poisoning were notified to the Department. The majority were of a trivial nature not calling for any specific action by the Public Health Department.

Acute Anterior Poliomyelitis

Thirty-one cases of this disease were notified, but six proved not to be anterior poliomyelitis, making a total of 25 true cases.

There were two deaths from this disease during the year.

Polioencephalitis

One case of this disease, which ended fatally, was notified during the year.

Encephalitis Lethargica

During the year two cases were notified as suffering from encephalitis lethargica, one of which proved to be dysentery ; while 8 others, not otherwise known to the Department, died from this disease.

Cerebro-Spinal Fever

There were 150 cases notified as cerebro-spinal fever during the year, and one case with a diagnosis of dysentery which proved to be cerebro-spinal fever. In 78 cases the diagnosis was afterwards revised, leaving 73 clinical cases of this disease. Of the 73 actual cases, 5 succumbed to the attack, giving a case mortality rate of 6·8%.

<i>Age Distribution.</i>						<i>Cases.</i>
Under 1 year	.....	.....	.....	.....	.....	17
1 and 2 years	.....	.....	.....	.....	.....	13
3 „ 4 „	.....	.....	.....	.....	.....	8
5 and under 10 years	.....	.....	.....	.....	.....	10
10 „ 15 „	.....	.....	.....	.....	.....	3
15 „ 20 „	.....	.....	.....	.....	.....	5
20 „ 25 „	.....	.....	.....	.....	.....	4
25 „ 35 „	.....	.....	.....	.....	.....	2
35 „ 45 „	.....	.....	.....	.....	.....	7
45 years upwards	.....	.....	.....	.....	.....	4

REPORT ON THE CITY INFECTIOUS DISEASES HOSPITALS FOR THE YEAR 1946

By DR. J. MCGARRITY, *Medical Superintendent.*

STATISTICS

Little Bromwich

The total admissions of all cases for the year 1946 were 4,361.

(a) DIPHTHERIA

*Uncorrected
for diagnosis.
Total.*

In hospital on the 31st December, 1945	150
Admitted during 1946	852
Discharged, 1946	927
Died, 1946	12
Remaining on the 31st December, 1946	63

(b) SCARLET FEVER

In hospital on the 31st December, 1945	41
Admitted during 1946	371
Discharged, 1946	390
Died, 1946	1
Remaining on the 31st December, 1946	21

(c) MISCELLANEOUS

In hospital on the 31st December, 1945	275
Admitted during 1946	3,138
Discharged, 1946	2,936
Died, 1946	156
Remaining on the 31st December, 1946	321

(d) MISCELLANEOUS. (*in detail*)

Chickenpox	148
Dysentery	220
Enteric fever	25
Encephalitis	1
Erysipelas	76
Gastro-enteritis	534
Measles	490
Meningitis	138
Miscellaneous	604
Mumps	27
Pemphigus	28
Pneumonia	31
Poliomyelitis	14
Puerperal fever	41
Rubella	19
Vincent's angina	28
Whooping cough	714

3,138

Diphtheria

During the year 852 patients were admitted to the hospital with a diagnosis of diphtheria. The diagnosis required revision in 574 cases. True cases of diphtheria treated in the wards numbered 287, including one notified as Vincent's angina, two as whooping cough and six admitted for observation.

Two cases suffered from chickenpox concurrently with diphtheria.

The revised diagnoses of 574 patients notified as diphtheria :—

Tonsillitis	374
Laryngitis	72
Vincent's angina	24
Quinsy	24
Scarlet fever	22
Broncho-pneumonia	8
Rhinitis	8
Measles	7
Whooping cough	6
Miscellaneous	29
	<hr/>
	574

The miscellaneous group consists of bronchiolitis (3), otitis media (3), adenitis (3), pharyngitis (2), stomatitis (2), glossitis (2), dysentery (2), diphtheria carrier (1), teething (1), lymphatic leukaemia (1), mumps (1), coma (1), secondary syphilis (1), parapharyngeal abscess (1), influenza (1), atypical pneumonia (1), cervicitis (1), no evidence of disease (2).

Three deaths occurred in the above cases of revised diagnosis, two from bronchiolitis and one from broncho-pneumonia.

Table showing types of diphtheria and mortality :—

<i>Type.</i>	<i>Total</i>	<i>Died.</i>	<i>Mortality.</i>
Faucial	245	2	0·8%
Faucial and nasal	24	2	8·3%
Nasal	7	—	—
Laryngeal	4	2	50·0%
Nasal and laryngeal	4	1	25·0%
Faucial and laryngeal	3	3	100·0%
	<hr/>		
	287	10*	3·5%

* One was a case from outside the City.

Five deaths occurred from diphtheria within twenty-four hours of admission, three within ten days and two later.

Analysis of the causes of death in the ten fatal cases in which diphtheria was diagnosed :—

Circulatory collapse	4
Laryngeal obstruction with cardiac failure	5
Diphtheritic broncho-pneumonia	1

The hospital mortality of 3·5% remains the same as in 1945.

Table showing mortality in diphtheria according to the day of disease on which serum was first administered :—

<i>Day of disease on which serum first given.</i>				<i>Total</i>	<i>Died.</i>	<i>Mortality.</i>
First	.....	.....	.....	10	—	—
Second	.....	.....	.....	51	2	3·9%
Third	.....	.....	.....	47	1	2·1%
Fourth	.....	.....	.....	63	—	—
Fifth	.....	.....	.....	41	2	4·9%
Sixth day or later	.....	.....	.....	72	4	5·6%
No serum	.....	.....	.....	3	*1	33·3%
				287	10†	3·5%

* Died before serum could be administered.

† One case from outside the City.

Serum dosage administered :—

0—3,000 units	.....	.....	.....	40 very mild cases
4,000—8,000 units	.....	.....	.....	172 mild cases
9,000 or more units (intramuscularly)	.....	.....	.....	34 moderately severe cases
20,000 to 80,000 units (intramuscularly and intravenously)	.....	.....	.....	38 severe cases

Serum urticaria was observed in only nine cases.

Types of diphtheria organisms were obtained in 191 cases as follows :—

Gravis organism	.....	.....	.....	.....	.....	.....	.....	36
Intermedius	.....	.....	.....	.....	.....	.....	.....	152
Mitis	.....	.....	.....	.....	.....	.....	.....	3

In 132 cases a history of immunisation was confirmed and two cases died (but see note below). In one case immunisation had been performed at 8 months, and the child was 3 years of age at the onset of diphtheria. He was admitted *in extremis* on the fifth day of an attack of laryngeal diphtheria and tracheotomy did not relieve the condition. Postmortem revealed membrane throughout the whole length of the larynx, trachea and right bronchus.

The other death occurred in a child who had been immunised six weeks before the onset of a laryngeal diphtheria at the age of 11 months. Tracheotomy relieved the obstruction in this case but the child died ten weeks later with a retained tracheotomy tube and cardiac failure.

Note.—As a minimum of three months is required to establish immunisation, this latter case is not to be reckoned as one of a death in a genuinely immunised child.

Post diphtheritic paralysis occurred as follows :—

Palatal	.....	46
Ciliary	.....	2
Facial	.....	1
Pharyngeal	.....	4
Peroneal	.....	10
Cervical	.....	1
Diaphragmatic	.....	1
		<hr/> 65

The paralyses noted above occurred in 47 patients, all of whom recovered, giving a paralysis rate of 16·4%.

Laryngeal Diphtheria

Eleven cases of diphtheria had some laryngeal involvement, and of these six required operative interference for the relief of obstruction.

In one case a successful result was obtained by intubation and in another tracheotomy relieved the obstruction, but the child died ten weeks later with a retained tube and cardiac failure.

In the other four cases neither intubation nor tracheotomy relieved the condition. In three cases post-mortem examination revealed extensive membrane in trachea and bronchi, while only the trachea was involved in the fourth.

In one case of acute streptococcal laryngitis tracheotomy was successfully performed for glottic oedema.

Table showing age and sex of diphtheria patients :—

Age Group.	0-5	5-10	10-15	15-25	25-45	Over 45	Totals
Recovered :							
Males	36	41	34	10	7	1	129
Females	19	45	38	23	18	5	148
Died :							
Males	5	—	—	—	1	—	6
Females	—	1	1	—	2	—	4
Totals	60	87	73	33	28	6	287

Hospital mortality 3·5%.

Scarlet Fever

During the year 371 patients were admitted with a notified diagnosis of scarlet fever ; of these 32 were corrected in diagnosis as follows :—

Tonsillitis	.....	8
Measles	.....	8
Erythema of unknown origin	.....	4
Drug rash	.....	2
Urticaria	.....	2
Common cold	.....	2
No evidence of any disease	.....	2
Chickenpox	.....	1
Rubella	.....	1
Food poisoning	.....	1
Adenitis	.....	1
		<hr/> 32

Actually 382 cases of true scarlet fever were treated in the wards during the year, of whom twenty-two were notified as diphtheria, eight as measles, nine were admitted for observation, one notified as rubella, one meningitis, one whooping cough, and one gastro-enteritis.

Concurrent infections occurred in six cases :—

Scarlet fever and concurrent measles	1
Scarlet fever and concurrent chickenpox	3
Scarlet fever and concurrent herpes zoster	2

The type of scarlet fever was very mild ; there were only three cases of toxic and one of septic scarlet fever. The remaining 378 were all simple. There were no fatal cases.

The principal complications are given below :—

Adenitis	38	9.9%
Otitis media	23	6.0%
Rhinitis	10	2.6%
Abscess	8	2.1%
Carditis	7	1.8%
Mastoiditis	6	1.6%
Pneumonia	3	0.8%
Arthritis	3	0.8%
Nephritis	2	0.5%
Tonsillitis	1	0.3%
	<hr/> 101 <hr/>	

The above complications occurred in 92 cases (24.1%).

Antistreptococcal serum was used for 251 cases, serum and chemotherapy for 87 cases, chemotherapy alone for 8, penicillin alone for 1 and serum, chemotherapy and penicillin for 4. No specific treatment was used in 31 cases.

Serum rashes were observed in 31 cases (8.1%), and serum arthritis in 5 (1.3%) cases.

Table showing age and sex of scarlet fever cases :—

Age Group	0-5	5-10	10-15	15-25	25-45	Over 45	Totals.
Recovered :							
Males	85	65	20	11	7	2	190
Females	65	64	27	22	13	1	192
Totals	150	129	47	33	20	3	382

Measles

In all 490 patients were admitted with a notified diagnosis of measles, and of these 59 required revision of diagnosis as follows :—

Scarlet fever	8
Rubella	7
Otitis media	4
Erythema	11
Bronchitis	5
Sulphonamide eruption	5
Serum urticaria	1
Miscellaneous	18 (5 died)
	<hr/>
	59
	<hr/>

The miscellaneous group consisted of one case of whooping cough, one case of dermatitis, two dysenteries, one osteomyelitis, one eczema, one rhinitis, one broncho-pneumonia, one papular urticaria, one coryza, one asthma, one laryngitis, one influenza, one late chickenpox, one gastro-enteritis, one abscess of neck, one acute haemolytic anaemia, and one miliary tuberculosis. The deaths in this miscellaneous group were one whooping cough ; one dysentery ; one gastro-enteritis ; one acute anaemia and one miliary tuberculosis.

Besides the 431 measles notified correctly an additional 37 cases of measles were treated, having been notified as follows :—

Scarlet fever	8
Whooping cough	8
Gastro-enteritis	2
Rubella	3
Diphtheria	7
Pneumonia	1
Meningitis	1
Miscellaneous	6
Mumps	1
	<hr/>
	37
	<hr/>

The total number of true measles was, therefore, 468.

Concurrent infections occurred as follows :—

Concurrent measles and whooping cough	8
Concurrent measles and chickenpox	17
Concurrent measles and scarlet fever	1
Concurrent measles and dysentery	24
Concurrent measles and dysentery and chickenpox	1
Concurrent measles and enteritis	1
	<hr/>
	52
	<hr/>

The principal complications were as follows :—

	<i>Recovered.</i>	<i>Died.</i>
Broncho-pneumonia on admission	51	—
Broncho-pneumonia after admission	12	2
Otitis media on admission	10	—
Otitis media after admission	5	—
Enteritis	23	—
Laryngitis	16	2
Convulsions	—	1
Stomatitis	10	—
Blepharitis	2	—
Tonsillitis	6	—
Mastoiditis	2	—
T.B. meningitis	—	1
Surgical emphysema	1	—
	<u>138</u>	<u>6</u>

Six deaths occurred among the measles cases, the causes of death being :—

Broncho-pneumonia	2
Broncho-pneumonia and laryngitis (old tracheotomy)	1
Laryngitis (tracheotomy).....	1
Miliary T.B.	1
Concurrent salmonella dysentery	1
	<u>6</u>

Table showing age and sex of measles patients :—

Age Group :	0-1	1-2	2-3	3-4	4-5	5-10	10-20	Over 20	Totals.
Recovered :									
Males	22	78	53	34	24	23	1	5	240
Females	23	58	46	24	28	31	3	9	222
Died :									
Males	1	1	—	—	—	1	—	—	3
Females	1	1	—	1	—	—	—	—	3
Totals	47	138	99	59	52	55	4	14	468

Hospital mortality, 1·3%.

Whooping Cough

In all 714 patients were admitted with a notified diagnosis of whooping cough. Of these 140 required revision of diagnosis as follows :—

Bronchitis	65
Broncho-pneumonia	15 (3 died)
No evidence of disease	14
Measles	8
Enteritis	11 (1 died)
Coryza	4
Tracheitis	3
Laryngitis	3
Tonsillitis	2
Diphtheria	2
Otitis media	2
Miliary tuberculosis	2 (2 died)
Miscellaneous	9
TOTAL	140

Actually 585 cases of whooping cough were treated in the wards, including those notified as :—

Diphtheria	6
Measles	2
Pneumonia	1
Miscellaneous	2
	11

Cases of concurrent infection :—

Whooping cough and measles	38
Whooping cough and chickenpox	7
Whooping cough and tonsillitis	1
Whooping cough and mumps	1
Whooping cough and scarlet fever	1
Whooping cough and diphtheria	1
Whooping cough and diphtheria carrier	1
Whooping cough and poliomyelitis	1
	51

The principal complications were as follows :—

<i>Onset on admission.</i>	<i>In patients who recovered.</i>	<i>In patients who died.</i>
Broncho-pneumonia	87	17
Bronchitis	17	—
Gastro-enteritis	16	2
Dysentery	21	2
Convulsions	1	3
Otitis media	6	—
Tuberculosis	3	1
Upper respiratory infections	11	—
Miscellaneous	32	—
	194	25

<i>Onset after admission.</i>	<i>In patients who recovered.</i>	<i>In patients who died.</i>
Broncho-pneumonia	29	3
Bronchitis	14	—
Gastro-enteritis	29	5
Dysentery	20	—
Convulsions	—	3
Otitis media	5	—
Upper respiratory infections	10	1
Miscellaneous	11	—
	<hr/> 118	<hr/> 12
Plus complications onset <i>on</i> admission	194	25
	<hr/> 312	<hr/> 37
	<hr/> <hr/>	<hr/> <hr/>

Of the 585 patients found to be suffering from whooping cough 136 were complicated by pneumonia and of these 20 died. In 104 cases pneumonia was present on admission and in 32 pneumonia developed while the patients were under treatment.

Amongst the whooping cough patients 32 deaths occurred, the cause of death being :—

Whooping cough and broncho-pneumonia	20
Whooping cough and gastro-enteritis	7
Whooping cough and convulsions	2
Whooping cough and miliary tuberculosis	1
Whooping cough and salmonella typhimurium	2
	<hr/> 32
	<hr/> <hr/>

Table showing age and sex of whooping cough patients :—

Age Group	0-1	1-2	2-3	3-4	4-5	5-10	Totals.
Recovered :							
Males	52	78	65	32	30	26	283
Females	46	71	61	29	34	29	270
Died :							
Males	17	2	2	—	—	—	21
Females	9	—	1	—	1	—	11
Totals	124	151	129	61	65	55	585

Mortality : 5.5%.

Cerebro-Spinal Meningitis

The total number of notified cases of meningitis admitted to the wards was 138, but of these 109 required revision of diagnosis as follows :—

Influenzal meningitis	.....	2 (1 died)
Pneumococcal meningitis	.....	5 (2 died)
Streptococcal meningitis	.....	1 (died)
Tuberculous meningitis	.....	11 (all died)
Bronchitis	.....	7
Influenza	.....	17
Orbital cellulitis	.....	2
Common cold	.....	2
Dysentery	.....	4
Otitis media	.....	2
Sinusitis	.....	3
Pyelitis	.....	1
Malaria	.....	1
Tonsillitis	.....	8
Cerebral degeneration	.....	1
Subarachnoid haemorrhage	.....	1
Purpura simplex	.....	1
Pneumonia	.....	11
Benign lymphocytic meningitis	.....	2
Measles	.....	1
Infective hepatitis	.....	1
Hypertensive encephalopathy	.....	1
Gastro-enteritis	.....	4 (2 died)
Syncope	.....	1
Cerebral tumour	.....	1
Constipation	.....	6
Scarlet fever	.....	1
Ophthalmoplegia	.....	1
Epilepsy	.....	1
Subacute bacterial endocarditis	.....	1 (died)
Meningismus	.....	2
Disseminated sclerosis	.....	1
Mumps	.....	1
Cerebral abscess	.....	2 (1 died)
Vaccinia	.....	1
Mastoiditis and encephalitis	.....	1
TOTAL		109

The actual number of cases treated was 31, which included :—

Notified as dysentery	.....	1 (died)
Notified for observation	.....	1

The chief complications were :—

Paresis	.....	1
Hydrocephalus	.....	2
Strabismus	.....	1
		4

No. of deaths : 1.

Mortality, 3·23%.

Gastro-Enteritis and Dysentery

During the year a total number of 890 cases of dysentery and gastro-enteritis were treated on the wards. There were 754 cases notified as gastro-enteritis and dysentery but of these 35 required revision of diagnosis.

Included in the total of 890 were the following diagnosed as dysentery :

Notified for observation	47
Notified as diphtheria	2
Notified as whooping cough	5
Notified as measles	2
Notified as pneumonia	3
Notified as enteric fever	1
Notified as Vincent's angina	1
Notified as encephalitis lethargica	1
Notified as meningitis	4
	<hr/>
	66
	<hr/>

and the following diagnosed as gastro-enteritis (no organism being found) :

Notified for observation	85 (10 died)
Notified as measles	1
Notified as whooping cough	6
Notified as enteric fever	7
Notified as mumps	1
Notified as meningitis	4 (1 died)
Notified as pneumonia	1
	<hr/>
	105
	<hr/>

Mixed infections occurred where two organisms were isolated as follows :—

Salmonella typhi-murium and Shigella Sonnei	25
Salmonella typhi-murium and Shigella Flexner	5
	<hr/>
	30 (no deaths)
	<hr/>

The following organisms were also isolated :—

Salmonella Newport	1
Salmonella Thompson	1
Salmonella enteritidis	2
Shigella Newcastle	4
B. alkalescens	1
Atypical Shigella organism	5
B. pyocyaneus	6
B. proteus	10
	<hr/>
	30 (no deaths)
	<hr/>

In the 35 cases in which no evidence of gastro-enteritis or dysentery could be found, the following diagnoses were made :—

Uraemia and arteriosclerosis	.....	.....	.....	.....	1 (died)
Infective hepatitis	.....	.....	.....	.....	3
Nephritis (acute and chronic)	.....	.....	.....	.....	3 (2 died)
Suppurative peritonitis	.....	.....	.....	.....	4 (3 died)
Peptic ulcer	.....	.....	.....	.....	2
Pneumococcal peritonitis	.....	.....	.....	.....	1
Acute endocarditis with mesenteric embolism	.....	.....	.....	.....	1 (died)
Nutritional anaemia	.....	.....	.....	.....	1 (died)
Coeliac disease	.....	.....	.....	.....	1
Pulmonary tuberculosis	.....	.....	.....	.....	1 (died)
Acute bronchitis	.....	.....	.....	.....	2
Chronic constipation	.....	.....	.....	.....	2
Carcinoma of colon	.....	.....	.....	.....	1
Congestive heart failure	.....	.....	.....	.....	1
Acute and chronic ulcerative colitis	.....	.....	.....	.....	3
Meningococcal septicaemia	.....	.....	.....	.....	1 (died)
No evidence of disease	.....	.....	.....	.....	7
					<hr/> 35 <hr/>

The principal complications were :—

Otitis media	.....	.....	.....	.....	8 (1 died)
Broncho-pneumonia	.....	.....	.....	.....	20
Eczema	.....	.....	.....	.....	8
Abscesses	.....	.....	.....	.....	4
Tonsillitis	.....	.....	.....	.....	4
					<hr/> 44 <hr/>

Overleaf is appended the principal sub-divisions into which dysentery fell according to the organism responsible. B. Morgani and B. paracolon have been treated as one as the pathogenic significance of these organisms is doubtful and their presence may possibly indicate some more toxic organism not actually isolated.

<i>Age Groups</i>	<i>Gastro-enteritis</i> Recov- ered Died tality	<i>Shigella Sonne</i> Recov- ered Died tality	<i>Shigella Flexner</i> Recov- ered Died tality	<i>Salmonella</i> <i>Typhi-Murium</i> Recov- ered Died tality	<i>B. Morgani and</i> <i>B. Paracolon</i> Recov- ered Died tality
0—6 months	201 42 17.3%	4 — —	— — —	31 2 6.1%	31 1 3.1%
6—12 months	143 10 6.5%	2 — —	— — —	20 1 4.8%	16 1 5.9%
1—2 years	20 — —	20 — —	2 — —	10 1 9.1%	13 — —
2—3 years	101 1 1.0%	1 — —	1 — —	1 — —	1 — —
3—5 years	46 1 2.1%	4 — —	3 — —	2 — —	3 — —
5—10 years	18 — —	3 — —	1 — —	— — —	1 — —
10 years and over	80 2 2.4%	12 — —	3 — —	8 1 11.1%	16 — —
TOTALS	609 56 8.4%	46 — —	10 — —	72 5 6.5%	81 2 2.4%

Miscellaneous Observations

There were 604 cases admitted to the wards for observation, classified as below :—

Gastro-enteritis	.....	85 (10 died)
Dysentery	.....	47
Scarlet fever	.....	9
Diphtheria	.....	6
Measles	.....	6
Chickenpox	.....	3
Mumps	.....	2
Whooping cough	.....	2
Rubella	.....	1
Meningococcal meningitis	.....	1
Upper respiratory infections	.....	197
Pneumonia	.....	16 (5 died)
Other respiratory diseases	.....	7
Jaundice	.....	24
Septic conditions	.....	18 (1 died)
Skin diseases	.....	17
Mastoiditis and otitis media	.....	7
Appendicitis	.....	4
Other abnormal conditions	.....	7 (1 died)
Tuberculosis (all forms)	.....	5 (2 died)
Injuries	.....	5
Miscellaneous	.....	56
No evidence of disease	.....	6
Babies accompanying mothers	.....	49
Mothers accompanying babies	.....	24
TOTAL		604

Erysipelas

Of the 76 cases notified as erysipelas 23 required revision of diagnosis as follow :—

Eczema	.....	4
Herpes zoster	.....	2
Cellulitis	.....	2
Sulphonamide rash	.....	2
Erythema	.....	2
Prepatella bursitis	.....	1
Herpes labialis	.....	1
Sycosis barbi	.....	1
Carbuncle of neck	.....	1
Boil and cavernous sinus thrombosis	.....	1 (died)
Uraemia	.....	1 (died)
Infra-clavicular abscess	.....	1
Peri-alveolar abscess	.....	1
Food poisoning	.....	1
Ulceration of leg	.....	1 (died)
Diabetic coma	.....	1 (died)
		23

The number of cases treated on the wards was 53. The site of the erysipelas was as follows :—

Face	43
Limbs	8
Trunk	2
	<hr/>
	53
	<hr/>

The principal complications occurred as follow :—

Abscesses	3
Secondary infection	1
Cellulitis	1
Blepharitis	1
Relapse	1
	<hr/>
	7
	<hr/>

Of the total, 40 patients were treated with serum and sulphonamides, 11 with serum, sulphonamides and penicillin, and two with serum and penicillin.

Table showing age and sex of erysipelas patients.

Age group	0-5	5-10	10-15	15-25	25-45	Over 45	Total.
Recovered :							
Males	—	—	—	1	6	13	20
Females	1	1	—	2	5	24	33
Totals	1	1	—	3	11	37	53

Mortality Nil.

Encephalitis

There was only one case of notified encephalitis revised to paracolon dysentery and one case notified as meningitis was revised to encephalitis. The patient recovered.

Enteric Fever

There were 25 cases notified as enteric fever and of these fourteen required revision of diagnosis as follow :—

Gastro-enteritis	7
Dysentery	1
Lobar pneumonia	2 (1 died)
Appendicitis and pelvic abscess	1
Constipation	1
Diabetes mellitus	1
Common cold	1
	<hr/>
	14
	<hr/>

Actual number of patients treated was eleven.

The organisms found were all *B. typhosus*. There was one death due to perforation of ileum and peritonitis.

The treatment given for nine of the eleven cases was chemotherapy and penicillin, and for two cases no specific treatment was given. There was one fatal case, perforation being the cause.

Mortality : 9.1%.

Pemphigus

There were twenty-eight cases notified as suffering from pemphigus and of these fourteen required revision of diagnosis :—

Pustular eruption	.....	11 (1 died gastro-enteritis)
Pneumonia and prematurity	.....	1 (1 died)
Napkin rash	.....	1
Eczema	.....	1
		<hr/>
		14
		<hr/>

Actually fifteen cases were treated including one notified as Vincent's angina. There were no deaths.

Poliomyelitis

There were fourteen cases of notified poliomyelitis of which eight required revision of diagnosis :—

Rickets	.....	1
Disseminated sclerosis	.....	1
Septic arthritis	.....	2
Meningismus	.....	1
Hemiplegia of unknown origin	.....	1
Headache of unknown origin	.....	1
Muscular wasting after fracture	.....	1
		<hr/>
		8
		<hr/>

There were six true cases. No deaths. There were five cases of residual paralysis.

Rubella

Altogether 19 cases were notified as suffering from rubella, and of these 12 required revision of diagnosis :—

Scarlet fever	.....	1
Measles	.....	3
Secondary syphilis	.....	1
Urticaria	.....	3
Seborrhoeic dermatitis	.....	1
Chronic nephritis	.....	1 (died)
Erythema of unknown origin	.....	1
Pyrexia of unknown origin	.....	1
		<hr/>
		12
		<hr/>

There were 16 true cases including :—

Notified as scarlet fever	.....	1
Notified as measles	.....	7
Notified for observation	.....	1
		<hr/>
		9
		<hr/>

There were no deaths.

Mumps

Altogether there were 27 notified cases of mumps of which 7 required revision :—

Submaxillary abscess	.....	2
Parotitis after dental extraction	.....	1
Measles and surgical emphysema	.....	1
Cervical adenitis	.....	2
Enteritis	.....	1
		<hr/>
		7
		<hr/>

Actually 24 cases were treated including :—

Notified as meningitis	.....	1
Notified as diphtheria	.....	1
Notified for observation	.....	2
		<hr/>
		4
		<hr/>

There were no deaths.

Pneumonia

There were 31 notified cases of pneumonia of which fifteen required revision of diagnosis :—

Miliary tuberculosis	.....	1
Gastro-enteritis	.....	1
Whooping cough	.....	2
Pulmonary infarction	.....	1
Measles	.....	1
Bronchitis	.....	5
Dysentery	.....	3
Common cold	.....	1
		<hr/>
		15
		<hr/>

The actual number of cases treated was 70 including :—

Notified as diphtheria	.....	8
Notified as meningitis	.....	11
Notified as pemphigus	.....	1 (died)
Notified as enteric fever	.....	2 (1 died)
Notified as measles	.....	1
Notified as whooping cough	.....	15 (2 died)
Notified for observation	.....	16 (5 died)
		<hr/>
		54
		<hr/>

Mortality : 12.9%.

Number of deaths, 9.

Vincent's Angina

There were 28 cases notified of which 20 required revision of diagnosis :

Stomatitis	13
Tonsillitis	3
Diphtheria	1
Pemphigus	1
Ludwig's angina	1
Dysentery	1
	<hr/>
	20
	<hr/>

The number of true cases of Vincent's angina was 8. There were no deaths.

Puerperal Pyrexia

The number of patients admitted under this heading was 41, the causes for the pyrexia being :—

Subinvolution	13
Pulmonary tuberculosis	2
Pre-eclampsia	1
Mastitis and breast abscess	5
Sepsis of perineum	3
Femoral thrombosis	2
Sepsis, pulmonary infarct and lung abscess	1
Subacute bacterial endocarditis	1
Pyelitis	1
Constipation	2
Anaemia	1
Septic finger	1
Pyrexia of unknown origin	7
No evidence of disease	1
	<hr/>
	41
	<hr/>

There were no deaths.

Chickenpox

There were 148 cases notified as chickenpox of which 13 required revision of diagnosis :—

Bronchitis	1
Impetigo	3
Septic spots	4
Urticaria	1
Seborrhoeic dermatitis	1
Folliculitis	1
Herpes zoster	1
Drug rash	1
	<hr/>
	13
	<hr/>

Actually 141 cases were treated including 1 notified as whooping cough, 1 notified as measles, one as scarlet fever and three for observation.

Concurrent infections occurred :—

Dysentery	2
Mumps	1
Herpes zoster	1
Scarlet fever	2
Gastro-enteritis	1
	<hr/>
	7

There were no deaths.

Summary of Miscellaneous Diseases

	<i>No. of cases notified.</i>	<i>Diag- nosis revised.</i>	<i>Notified as another disease.</i>	<i>Actual No. of cases</i>	<i>Died</i>	<i>Case Mortality.</i>
Chickenpox	148	13	6	141	—	—
Dysentery	220	5	66	281	7	2.5%
Enteric fever	25	14	—	11	1	9.1%
Encephalitis	1	1	1	1	—	—
Erysipelas	76	23	—	53	—	—
Gastro-enteritis	534	30	105	609	56	8.4%
Measles	490	59	37	468	6	1.28%
Meningitis	138	109	2	31	1	3.23%
Miscellaneous	604	—	—	—	—	—
Mumps	27	7	4	24	—	—
Pemphigus	28	14	1	15	—	—
Pneumonia	31	15	54	70	9	12.9%
Poliomyelitis	14	8	—	6	—	—
Puerperal fever	41	—	—	41	—	—
Rubella	19	12	9	16	—	—
Vincent's angina	28	20	—	8	—	—
Whooping cough	714	140	11	585	32	5.47%
	<hr/>					
	3,138	470	296	2,360	112	

Operations

During the year eighty operations were performed in the theatre.

Mastoidectomies	23
Abdominal	10
Incisions of abscesses	10
Gynaecological	4
Empyema drainage	2
Osteomyelitis drainage	1
Tonsils and adenoids removed	1
Miscellaneous (minor)	29
	<hr/>
	80

The surgeons attended on fifty-two occasions to perform the above operations. Twenty-five of the minor miscellaneous operations were performed by the resident staff.

Staff Prophylaxis

All members of the nursing staff were Schick and Dick tested soon after entering the hospital.

Dick and Schick tested	.....	110
Dick negative and Schick negative	.....	59
Dick positive and Schick positive	.....	10
Dick positive and Schick negative	.....	19
Dick negative and Schick positive	.....	22
Total	.....	110
Schick positive	.....	32
Acquired immunity after treatment	.....	27
Left before complete	.....	3
Required further course before negative	.....	2
Total	.....	32
Dick positive	.....	29
Acquired immunity after treatment	.....	19
Left before complete	.....	6
Required further course before negative	.....	3
Course not yet complete	.....	1
Total	.....	29

In addition the existing members of the staff are tested at six-monthly intervals.

Nurses were immunised against enteric fever.

Sickness Amongst the Staff during 1946

Colds and coughs	.....	25
Tonsillitis and sore throats	.....	17
Diarrhoea and vomiting	.....	12
Influenza	.....	11
Infective hepatitis	.....	10
Septic fingers	.....	10
Boils	.....	7
Cuts and bruises	.....	6
Measles	.....	5
Appendicectomy	.....	4
Burns and scalds	.....	3
Scabies	.....	3
Enteritis, gastro-enteritis	.....	3
Strains	.....	2
Swelling of face (due to tooth extraction)	.....	2
General malaise	.....	2
Rubella	.....	1
Scarlet fever	.....	1
Diphtheria	.....	1
Pneumonia	.....	1
Miscellaneous	.....	18

X-ray

Three hundred and forty-three cases were X-rayed during the year for the following reasons :—

Chest symptoms	.....	201
Routine examination, Nurses' chests	.....	68
Suspected injuries :		
Upper limbs	.....	14
Lower limbs	.....	10
Suspected disease :		
Upper limbs	.....	26
Lower limbs	.....	8
Skull	.....	4
Foreign bodies	.....	4
Miscellaneous	.....	8
TOTAL		343

Laboratory

The following is a summary of the work conducted in this hospital during the year 1946 :—

<i>Examinations.</i>							<i>Number.</i>
B. diphtheria	Positive	.....	.....	.....	.....	.....	307
B. diphtheria	Negative	.....	.....	.....	.....	.....	1,993
Streptococci	Present	.....	.....	.....	.....	.....	58
Streptococci haemolytic positive		.....	.....	.....	.....	.....	6
Streptococci haemolytic negative		.....	.....	.....	.....	.....	10
Blood cytological		.....	.....	.....	.....	.....	77
Blood organisms		.....	.....	.....	.....	.....	6
Blood widal agglutination tests		.....	.....	.....	.....	.....	63
Blood grouping		.....	.....	.....	.....	.....	2
Blood fragility		.....	.....	.....	.....	.....	1
Cerebro-spinal fluid protein estimation		.....	.....	.....	.....	.....	353
Cerebro-spinal fluid sugar estimation		.....	.....	.....	.....	.....	360
Cerebro-spinal fluid chlorides		.....	.....	.....	.....	.....	32
Cerebro-spinal fluid cytological		.....	.....	.....	.....	.....	343
Cerebro-spinal fluid microscopical deposit		.....	.....	.....	.....	.....	375
Cerebro-spinal fluid organisms		.....	.....	.....	.....	.....	367
Vincent's angina positive		.....	.....	.....	.....	.....	43
Vincent's angina negative		.....	.....	.....	.....	.....	97
Various examinations		.....	.....	.....	.....	.....	1,516
TOTAL							6,009

PREVENTION OF BLINDNESS

General Outline of Facilities Available in the City

The arrangements continue substantially on the lines and over the same range of services as immediately before the war, except that during the year allowances payable to blind persons were increased.

The number of Birmingham residents on the blind register at the end of 1946 was 659 males and 663 females, a total of 1,322, which is nineteen more than at the end of 1945.

REPORT ON TUBERCULOSIS

By DR. J. E. GEDDES, *Chief Clinical Tuberculosis Officer*

The Public Health Committee maintain a single dispensary centrally situated in the City, and provide 751 beds in four sanatoria for the treatment of all forms of tuberculosis in adults and children.

The beds are allocated as follows :—

	<i>Men</i>	<i>Women</i>	<i>Children</i>	<i>Total</i>
City Sanatorium, Yardley Green				
Road	194	144	75	413*
West Heath Sanatorium	63	87	—	150
Romsley Hill Sanatorium	75	45	—	120*
Salterley Grange Sanatorium	38	30	—	68
	370	306	75	751

* Inclusive of 36 observation beds in the City Sanatorium, Yardley, and 32 beds in the Romsley Hill Sanatorium rented to other authorities.

During 1946 the normal complement of beds was available but 25 beds in the Romsley Hill Sanatorium were closed throughout the year because of the shortage of nursing staff.

The number of patients awaiting admission and the duration of treatment during 1946 are shown in the following statement :—

	<i>Average number of patients on waiting list each month.</i>	<i>Average period on waiting list.</i>	<i>Average duration of Sanatorium treatment.</i>
Men	70	10 weeks	180 days
Women	83	17 „	199 „
Children	46	19 „	342 „

These are unsatisfactory records. The number of patients on the waiting list on 31st December, 1946, was 236, which represents 32.5 per cent. of the number of patients in the sanatoria on that date. The average waiting period throughout the year was 107 days. Circumstances of this kind are a formidable handicap and particular attention has been given by the Tuberculosis Sub-Committee to the need to acquire additional accommodation for the treatment of all forms of tuberculosis in adults and children.

Kyre Park--Children

The Tuberculosis Sub-Committee have made arrangements to purchase Kyre Park. This mansion, which was used during the war as an E.M.S. Hospital, will provide accommodation for 70 children and should become available during the latter part of 1947.

Adults

Additional accommodation for adults and contact children under the age of 5 is also essential and proposals to extend the present facilities were under review towards the end of the year.

Staff

Despite considerable efforts in various directions there was no improvement in the recruitment of staff. Work in each sanatorium was made difficult because of shortage of staff. It is appropriate to acknowledge the invaluable assistance of members of the present nursing and domestic staff who have assisted so willingly and effectively in circumstances of substantial difficulty.

Notifications

The notification rate during 1946 for all forms of tuberculosis was 1·28 per 1,000 population, a decrease in comparison with the figures for 1945 of 48 or 0·08 per 1,000 of the population.

In comparison with 1945 the pulmonary rate has decreased by 58 cases or 0·09 per 1,000 of the population. The non-pulmonary figure has increased by 10 but the rate per 1,000 of the population remains unaltered.

Mortality

The mortality rate during 1946 from all forms of tuberculosis was 0·68 per 1,000 population, which represents in comparison with 1945 a decrease of 60 deaths or 0·08 per 1,000 of the population.

The pulmonary mortality rate was 0·61 and the non-pulmonary rate 0·07 per 1,000 of the population.

The number of cases and deaths occurring in past years are shown in the following tables :—

TUBERCULOSIS (All forms)

		<i>New Cases</i>	<i>Rate per 1,000 Population</i>	<i>Deaths</i>	<i>Death-rate per 1,000 Population</i>
1901—1910 (average)	.....	—	—	1,309	1·65
1911—1920	„	—	—	1,284	1·46
1921—1930	„	1,824	1·91	1,031	1·08
1931—1935	„	1,459	1·43	928	0·91
1936	.....	1,136	1·10	805	0·78
1937	.....	1,119	1·07	836	0·80
1938	.....	1,209	1·15	813	0·78
1939	.....	1,036	0·98	885	0·84
1940	.....	1,049	1·03	855	0·84
1941	.....	1,073	1·13	850	0·90
1942	.....	1,257	1·30	833	0·86
1943	.....	1,239	1·28	750	0·78
1944	.....	1,371	1·38	782	0·79
1945	.....	1,348	1·36	749	0·76
1946	.....	1,300	1·28	689	0·68

The relative prevalence and mortality from pulmonary and other forms of tuberculosis are shown in the two subsequent tables:—

PULMONARY TUBERCULOSIS

		<i>New</i>	<i>Rate</i>	<i>Deaths</i>	<i>Death-rate</i>
		<i>Cases</i>	<i>per 1,000</i>		<i>per 1,000</i>
			<i>Population</i>		<i>Population</i>
1901—1910 (average)	.....	—	—	993	1.25
1911—1920	„	—	—	1,059	1.20
1921—1930	„	1,533	1.61	892	0.94
1931—1935	„	1,225	1.20	824	0.80
1936	.....	962	0.93	734	0.71
1937	.....	965	0.93	756	0.72
1938	.....	1,011	0.96	732	0.70
1939	.....	863	0.82	808	0.77
1940	.....	899	0.88	786	0.77
1941	.....	922	0.97	768	0.81
1942	.....	1,069	1.11	745	0.77
1943	.....	1,106	1.14	681	0.71
1944	.....	1,190	1.20	696	0.70
1945	.....	1,193	1.21	671	0.68
1946	.....	1,135	1.12	616	0.61

NON-PULMONARY TUBERCULOSIS

		<i>New</i>	<i>Rate</i>	<i>Deaths</i>	<i>Death-rate</i>
		<i>Cases</i>	<i>per 1,000</i>		<i>per 1,000</i>
			<i>Population</i>		<i>Population</i>
1901—1910 (average)	.....	—	—	317	0.40
1911—1920	„	—	—	224	0.26
1921—1930	„	290	0.31	139	0.14
1931—1935	„	234	0.23	104	0.10
1936	.....	174	0.17	71	0.07
1937	.....	154	0.15	80	0.08
1938	.....	198	0.19	81	0.08
1939	.....	173	0.16	77	0.07
1940	.....	150	0.15	69	0.07
1941	.....	151	0.16	82	0.09
1942	.....	188	0.19	88	0.09
1943	.....	133	0.14	69	0.07
1944	.....	181	0.18	86	0.09
1945	.....	155	0.16	78	0.08
1946	.....	165	0.16	73	0.07

The localisation of the disease in the case of the 73 deaths from non-pulmonary tuberculosis is shown in statement (a), and an analysis according to sex and age of all notifications and deaths is given in statement (b).

(a)

Tuberculous meningitis	.....	26
Abdominal tuberculosis	.....	10
Bone and joint tuberculosis	.....	6
Disseminated tuberculosis	.....	24
Tuberculosis of other organs	.....	7

The incidence of tuberculous meningitis during 1944 was 43 : 1945, 33 : and 1946, 26. This steady decline is satisfactory and the number of cases recorded during 1946 is 9 below the average for the years 1933-36.

(b)

PULMONARY TUBERCULOSIS

Age	Male		Female	
	Cases	Deaths	Cases	Deaths
0—	3	—	4	4
1—2	18	4	10	3
3—4	13	1	9	3
5—14	33	2	40	4
15—24	121	22	206	80
25—44	235	123	157	100
45—64	198	180	51	47
65—74	26	28	3	7
75 and above	7	7	1	1
	654	367	481	249

Total Cases, 1,135 ; Total Deaths, 616

NON-PULMONARY TUBERCULOSIS

Age	Male		Female	
	Cases	Deaths	Cases	Deaths
0—	1	2	5	3
1—2	4	4	1	2
3—4	3	2	6	1
5—14	22	7	24	6
15—24	17	6	23	6
25—44	18	14	20	8
45—64	9	5	7	3
65—74	1	1	2	2
75 and above	1	—	1	1
	76	41	89	32

Total Cases, 165 ; Total Deaths, 73

Grand Totals : Cases 1,300

Deaths 689

NOTIFICATION RATE

Pulmonary Tuberculosis

The number of new cases of pulmonary tuberculosis notified during 1946 was 272 (31·5%) above the notification figure for 1939.

Non-Pulmonary Tuberculosis

The number of new cases of non-pulmonary tuberculosis notified during 1946 was 8 (4·6%) below the notification figure for 1939, and 5 (3·1%) above the average incidence for the years 1940-1944.

Non-Notification

The number of deaths from non-notified pulmonary tuberculosis was 46 or 7·5% and from non-pulmonary tuberculosis 8 or 11·0%.

The percentage of non-notified deaths from all forms of tuberculosis was therefore 7·8% ; but in 30 cases the diagnosis was established following an autopsy, and the corrected figure is 3·5% of the total deaths from all forms of tuberculosis. The figure for 1945 was 3·0%.

MORTALITY RATE

Pulmonary Tuberculosis

The mortality rate from pulmonary tuberculosis was the lowest so far recorded. This low rate despite the substantial increase in notifications since 1939 is altogether satisfactory.

Non-Pulmonary Tuberculosis

The mortality rate from non-pulmonary tuberculosis does not show any particular change and has remained approximately at the present figure over the past 10 years.

These figures of notification and mortality rates do not reveal any particular change from the corresponding figures for 1945 with the exception of an increase of 14 or 54% in the number of cases of pulmonary tuberculosis in the female age group 5-14 and 18 or 9.6% in the age group 15-24.

The position is different in the male groups where the number of cases in the 5 to 14 age group is unaltered whilst in the 15-24 age group there is a reduction of 30 or 20%.

The mortality rate in females in the age group 5-14 is unaltered, whilst the rate in the 15-24 has increased by 17 or 27%.

In males the mortality rate in the age group 5-14 has fallen by 5 or 71.5%, and in the age group 15-24 by 21 or 48.8%.

The average notification and mortality figures for the years 1934-1936 and 1944-1946 in these age groups are shown in the following statement :—

Notifications

<i>Age Groups</i>			<i>Percentage comparison</i>	
	1934—1936	1944—1946	1944-46 with 1934-36 <i>Increase per cent.</i>	<i>Decrease per cent.</i>
MALES				
5-14	33	30	—	9.1
15-24	122	137	12.3	—
FEMALES				
5-14	38	32	—	15.8
15-24	159	191	20.1	—

Deaths

		MALES	
5-14	2	5	150.0
15-24	58	35	—
		FEMALES	
5-14	5	4	—
15-24	87	75	—

The present (1946) increase in the number of cases of pulmonary tuberculosis in females in the age groups 5-14 and 15-24 is probably not significant but at least warrants attention.

ANTI-TUBERCULOSIS CENTRE

Senior Assistant Tuberculosis Officer : Dr. J. R. D. Todhunter.

The Anti-Tuberculosis Centre is open throughout the week, on Saturdays for the half-day and one evening session is held.

The medical staff employed at the Centre, with the exception of Dr. Todhunter and Dr. Gilmore, are also responsible for the administrative and clinical work of the municipal sanatoria.

The number of patients on the tuberculosis register on 31st December, 1946, was 6,559 ; the number transferred to other areas during the year and the untraced cases numbered 199 ; the number transferred to this area from other areas and the untraced cases identified was 146.

During the year 1,135 new cases of pulmonary tuberculosis were notified, and of that number 1,108 or 97·6% were examined at the Centre.

The amount of work undertaken at the Centre during 1945 and 1946 is shown in the following statement :—

	1945	1946
Attendances for consultation and examination	10,933	13,329
Attendances for supervision and treatment	1,001	1,454
Attendances for X-ray examination	15,610	17,573
Attendances for artificial pneumothorax treatment	3,754	3,934
Attendances for artificial light treatment	1,281	925
	<u>32,579</u>	<u>37,215</u>

The following tables show the classification of patients examined at the centre during the year :—

		CLASSIFICATION					
ADULTS		Initial examination.			Mass	Re-examination.	
		Newly notified.	Contacts.	Suspects.	Radio-graphy Suspects.	Old Cases.	Contacts and Suspects.
Pulmonary :							
Group I	123	12	103	18	1,042	4	
Group II	221	18	254	22	2,096	7	
Group III	121	2	111	2	736	2	
Non-pulmonary :							
Group IV	47	2	20	—	204	—	
No treatment required	157	556	3,642	229	90	966	
	669	590	4,130	271	4,168	979	

		CLASSIFICATION					
CHILDREN		Initial examination.			Mass	Re-examinations.	
		Newly notified.	Contacts.	Suspects.	Radio-graphy Suspects.	Old Cases.	Contacts and Suspects.
Pulmonary :							
Group I	28	31	22	—	285	5	
Group II	7	1	5	—	34	1	
Group III	5	—	2	—	12	—	
Non-pulmonary :							
Group IV	8	1	4	—	114	1	
No treatment required	22	522	780	20	22	590	
	70	555	813	20	467	597	

Reference has been made in previous reports to the considerable proportion of adult cases of pulmonary tuberculosis showing evidence of advanced disease on initial examination.

The figure for 1943 was 36·4% ; for 1944, 30% ; for 1945, 30% ; and for 1946, 23·4%.

These figures show a distinct improvement and it is most unfortunate that the improvement should coincide with conditions which make prompt Sanatorium treatment impossible.

It is of interest to consider in the light of these records the number of patients referred for examination whose lung disease was early and where sputum if present was negative.

The figures are as follows :—

		<i>Total Cases.</i>	<i>Group I (sputum negative)</i>	<i>Percentage of Total Cases.</i>
1933	.....	995	126	12·7
1938	.....	957	140	14·6
1946	.....	1,007	256	25·4

These results are of particular interest and mark the response to the considerable endeavours made during recent years to bring under treatment cases of early pulmonary tuberculosis.

ADULTS

TREATMENT RECOMMENDED

	<i>Initial examination.</i>			<i>Mass Radio- graphy Suspects.</i>	<i>Re-examination.</i>	
	<i>Newly notified.</i>	<i>Contacts.</i>	<i>Suspects.</i>		<i>Old Cases.</i>	<i>Contacts and Suspects.</i>
Sanatorium treatment	350	26	356	24	282	12
Dispensary treatment	—	—	—	—	4	—
Supervision	80	2	41	4	1,067	3
Out-patient, light treatment	3	—	4	—	11	—
Artificial pneumo- thorax treatment	8	—	1	—	5	—
Domiciliary treatment	71	4	88	14	1,924	1
No treatment required	157	558	3,640	229	875	963
	669	590	4,130	271	4,168	979

CHILDREN

	<i>Initial examination</i>			<i>Mass Radio- graphy Suspects</i>	<i>Re-examination</i>	
	<i>Newly notified</i>	<i>Contacts</i>	<i>Suspects</i>		<i>Old Cases</i>	<i>Contacts and Suspects</i>
Sanatorium treatment	35	28	23	1	18	4
Dispensary treatment	—	—	—	—	—	—
Supervision	11	4	9	—	301	3
Out-patient light treatment	—	—	1	—	2	—
Domiciliary treatment	2	3	2	—	63	—
No treatment required	22	520	778	19	83	590
	70	555	813	20	467	597

Contacts

The number of contacts examined in relation to the total notifications for 1946 and to individuals on the Tuberculosis Register is obviously inadequate. Supervision is defective and an extension of this work is essential.

CONTACTS EXAMINED DURING 1946.

<i>Total Number of Cases.</i>			<i>Contacts to patients with sputum containing tubercle bacilli.</i>		<i>Contacts to patients with negative sputum.</i>	
<i>0 to 5 years.</i>						
Tuberculous	22	8.9%	16	72.7%	6	27.3%
Non-Tuberculous	224	91.1%	133	59.4%	91	40.6%
	246		149		97	
<i>6 to 15 years.</i>						
Tuberculous	14	4.1%	9	64.3%	5	35.7%
Non-Tuberculous	324	95.9%	195	60.2%	129	39.8%
	338		204		134	
<i>16 years and over :</i>						
Tuberculous	35	6.3%	25	71.4%	10	28.6%
Non-Tuberculous	519	93.7%	353	68.0%	166	32.10%
	554		378		176	

It is of interest to compare the incidence of active tuberculosis in these contacts (16 years and above), with the number detected under the mass radiography scheme. The figures are 6.3% and 0.48% respectively.

Dental Treatment

The part-time services of a dental surgeon are available at the centre. The treatment is conservative in type, but patients who wish to provide their own dentures can do so under advantageous conditions by arrangement with the dental surgeon.

The following statement shows the work undertaken :—

Extractions	.....	.....	.....	.....	.....	.....	.....	252
Scalings and fillings	.....	.....	.....	.....	.....	.....	.....	10
Dentures	.....	.....	.....	.....	.....	.....	.....	15

Work of the Tuberculosis Visitors

There are ten nurses engaged as Tuberculosis Visitors in the Department. The visitors are concerned with the domiciliary welfare of the patient ; the range of their duties is wide, and the character of the work varied. It is their primary duty to make enquiry into every case of tuberculosis, and maintain by regular visits close contact with the patient in his home.

After-care, in all its aspects is the concern of the visitor, and an indication of the scope of the work is shown in the following statement.

VISITS PAID BY TUBERCULOSIS VISITORS DURING 1946

Primary visits (to new cases)	1,618
Routine re-visits	21,792
Special visits and re-visits	7,421

The following statement gives an indication of certain of the after-care activities of the department :—

Beds issued	349
Chalets provided	13
Grants of clothing and nursing appliances	559
Number of fares paid for patients	285
Allowances granted	610
Grants of food made	96
Red Cross Society parcels recommended	188

(The provision of chalets is governed by the fitness of the patient to sleep or rest unattended for prolonged periods out of doors).

The close co-operation existing between the Anti-Tuberculosis service, the School Medical Officer's Department, and the Maternity and Child Welfare Department, is most valuable, and has provided opportunities for the after-care service to be widely applied.

Disinfection

The disinfection of 1,390 houses where a member of the family had suffered or died from tuberculosis, or changed his or her address, was undertaken during the year.

Housing

The housing problem during the year has continued to be a difficult one, but despite these difficulties the Estates Department has been able to offer suitable accommodation to 69 tuberculous families; that in present circumstances is a commendable record, but the general position is in no sense satisfactory.

A standard of housing for the tuberculous needs to be applied, containing as an inviolable condition the provision of a separate bedroom of adequate capacity, together with simple equipment for the disposal of sputum and the sterilisation of crockery and cutlery. The movement of a patient from the good environmental conditions of the sanatorium to a bad domestic environment is the height of folly, for it is an obvious neglect of a basic principle in treatment and in prevention. There are in the present circumstances no grounds for complacency, and until conditions in the home support the work of the sanatorium much valuable curative effort will continue to be wasted.

Action under Legal Enactment

It was unnecessary during the year to take action under the Public Health (Prevention of Tuberculosis) Regulations, 1925, relating to tuberculous employees in the milk trade ; nor was Section 172 of the Public Health Act, 1936, employed to remove any patient compulsorily to a sanatorium.

Allowances

The following table shows the applications received during the year :—

Total applications received	.....	763
Allowances granted	.....	610 or 80%
Allowances not granted	.....	153 or 20%

<i>Reason for rejection</i>	<i>Number</i>	<i>Percentage of total applications</i>
(Memo. 266/T Scheme and General Scheme)		
Treatment recommended not accepted	1	·13
Ineligible for financial and domestic reasons	75	9·83
Employed at date of application	2	·26
Applicants in sanatorium and without dependants	71	9·31
Left City	4	·52
	<hr/> 153	<hr/> 20·05

The total payment of allowances during the year was Memo. 266/T Scheme, £20,060 11s. 0d. ; Public Health Scheme, £13,975 4s. 0d. Total of £34,035 15s. 0d.

Reference was made in the Report for 1945 to the general position which would arise with the cessation of allowances under the Memo. 266/T Scheme, and their replacements by benefits under the National Insurance Act. It was suggested that such an alteration in practice would react to the considerable disadvantage of the tuberculous patient and his family.

During October an analysis of the position was undertaken by the Assessment Officer (Mr. H. B. Coleman), and that analysis showed that if allowances (Memo. 266/T) were replaced by benefit (National Insurance Act), the financial position of 326 patients would be affected as follows :—

102 single patients would gain from 1/- to 4/- weekly.

51 single patients would lose from 1/- to 13/- weekly.

2 married patients would gain from 3d. to 3/6 weekly.

171 married patients would lose from 1/- to 23/- weekly.

These circumstances deserve the most careful consideration ; and whilst preferential advantages in the amount of sickness benefit may be a difficult principle, the peculiar needs of the tuberculous population fully warrant, both in the interests of the patient and of the community, particular attention and separate consideration.

SANATORIA

	<i>Matron</i>	<i>Medical Superintendent</i>
Yardley Green Road Sanatorium:	Miss W. Davies	Dr. J. E. Geddes
West Heath Sanatorium:	Miss E. G. Davis	Dr. J. McWm. Taylor
Romsley Hill Sanatorium:	Miss D. Lee	Dr. D. J. Peebles
Salterley Grange Sanatorium:	Miss M. Ross	Dr. D. C. Waddy

Comment has been made in an earlier section of this report on the difficulties which have been experienced in the general recruitment of staff. This shortage has greatly increased the responsibilities of the matrons, and senior administrative nursing officers of the City Sanatoria. I have satisfaction in recording the very able manner in which over the year they have allocated the reduced staff to the various departments, and by their own competence and keenness ensured the maximum efficiency in circumstances of real difficulty. The shortage of staff has increased equally the work of the ward sisters and the junior nursing staff; the service owes much to their vigorous collaboration under the constant trial of inadequately staffed wards.

The following table shows the duration and result of treatment of 888 patients discharged from the municipal sanatoria during the year 1946:—

Classification on admission.	Condition on discharge.	Under 3 months but exceeding 28 days.						Duration of residential treatment in the Sanatoria						Totals			Grand Totals
		3—6 months			6—12 months			More than 12 months									
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.				
Pulmonary Tuberculosis	T.B. minus	5	—	7	4	4	2	1	1	5	2	—	10	12	5	24	41
	Quiescent	28	25	3	35	34	6	20	19	19	4	6	3	87	84	202	
	Not quiescent	3	1	—	—	—	1	1	—	—	1	—	—	5	1	7	
	Died in Sanatoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Pulmonary Tuberculosis	T.B. plus Group I	—	1	—	—	4	—	—	2	—	—	1	2	—	1	2	3
	Quiescent	—	3	—	—	—	—	10	2	2	1	2	1	23	11	37	
	Not quiescent	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1	
	Died in Sanatoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Pulmonary Tuberculosis	T.B. plus Group II	57	23	—	45	48	—	2	36	—	11	15	—	2	157	122	2
	Quiescent	6	4	—	7	7	—	7	4	—	1	1	—	21	16	37	
	Not quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	Died in Sanatoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Pulmonary Tuberculosis	T.B. plus Group III	40	12	—	42	18	—	10	19	—	1	8	—	1	102	57	1
	Quiescent	20	17	—	14	5	1	9	10	—	5	4	—	48	36	159	
	Not quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	85	
	Died in Sanatoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Totals		160	85	10	158	120	10	105	91	26	36	37	16	459	333	62	854
Non-Pulmonary Tuberculosis	Bones and Joints	—	1	—	—	—	—	—	—	1	—	1	—	—	2	1	1
	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
	Not quiescent	—	—	—	—	—	—	2	—	—	—	—	—	4	—	—	—
	Died in Sanatoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Non-Pulmonary Tuberculosis	Abdominal	—	—	—	—	1	—	—	—	1	—	1	—	—	2	1	3
	Quiescent	—	—	—	—	2	—	—	1	—	—	1	—	—	5	—	5
	Not quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
	Died in Sanatoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Non-Pulmonary Tuberculosis	Other organs	1	—	—	1	—	—	—	—	—	—	—	1	2	—	1	3
	Quiescent	3	1	—	—	—	—	1	—	—	—	—	—	4	1	5	5
	Not quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
	Died in Sanatoria	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Non-Pulmonary Tuberculosis	Peripheral Glands	—	1	—	2	1	1	—	—	—	—	—	1	—	2	1	3
	Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
	Not quiescent	—	—	—	—	—	—	—	—	—	—	—	—	2	2	1	—
	Died in Sanatoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals		5	5	—	3	4	2	3	1	3	1	4	3	12	14	8	34

“Quiescent” disease indicates that there are no symptoms or signs of tuberculous disease except such as are compatible with a completely healed lesion, and in which sputum, if present, is free from tubercle bacilli.

Average Duration of Residence

	1945	1946
Adult males	125 days	180 days
Adult females	148 „	199 „
Boys	277 „	293 „
Girls	389 „	391 „

The above figures exclude patients admitted for observation who were in residence for a short period, and cases with advanced disease who died within a few days following admission.

Observation Beds

The Anti-Tuberculosis Scheme includes 36-beds at the City Sanatorium for observation and investigation. "Observation" patients are those who, after careful and repeated examinations at the Centre, are found to be indefinite either as to the absence or presence of tuberculosis or as to its activity or quiescence when present.

Of the 1,144 patients discharged from the Sanatorium 165 or 14·4% were admitted primarily for observation to the Yardley Green Road Sanatorium. The results of investigation are shown in the following table :—

<i>Diagnosis on discharge from observation ward</i>	<i>For Pulmonary Tuberculosis</i>						<i>For Non-Pulmonary Tuberculosis</i>						<i>Totals</i>		
	<i>Stay under 4 weeks</i>			<i>Stay over 4 weeks</i>			<i>Stay under 4 weeks</i>			<i>Stay over 4 weeks</i>					
	<i>M.</i>	<i>F.</i>	<i>Ch.</i>	<i>M.</i>	<i>F.</i>	<i>Ch.</i>	<i>M.</i>	<i>F.</i>	<i>Ch.</i>	<i>M.</i>	<i>F.</i>	<i>Ch.</i>	<i>M.</i>	<i>F.</i>	<i>Ch.</i>
Tuberculous	7	8	10	9	5	20	—	—	2	1	—	—	17	13	32
Non-tuberculous	21	16	12	17	16	14	—	—	1	2	—	2	40	32	29
Doubtful	—	2	—	—	—	—	—	—	—	—	—	—	—	2	—
	28	26	22	26	21	34	—	—	3	3	—	2	57	47	61

Hospital Beds

The scheme is fortunate in that it has a considerable number of beds for the care and treatment of the patient with advanced pulmonary tuberculosis. These beds are invaluable as a prophylactic asset in connection with the maintenance of the public health of the City.

During the period under review there were 689 deaths in the City from all forms of tuberculosis, and of this number 353 or 51·2% occurred in the municipal sanatoria or in hospitals controlled by the Public Health Committee.

Thoracic Surgery

The surgical work of the department has been extended under the direction of Mr. A. L. d'Abreu. Arrangements have been made for Mr. d'Abreu to hold consultation sessions at each sanatorium and also at the Anti-Tuberculosis Centre. During 1946 the following sessions were arranged :—

Romsley Hill Sanatorium	4
Salterley Grange Sanatorium	2
West Heath Sanatorium	4
Anti-Tuberculosis Centre	10

The number of operations performed since July, 1946, was as follows :

Miscellaneous	16
Thoracoscopy	68
Phrenic crush or evulsion	55
Thoracotomy	2
Extra pleural pneumothorax	2
Thoracoplasty	17
Bronchoscopy	23
Resection of colon	1
	<hr/>
	184
	<hr/>

I desire to acknowledge the co-operation of Mr. A. L. d'Abreu, the consultant thoracic surgeon, Mr. J. B. Leather, the consultant orthopaedic surgeon, and Dr. M. Galbraith, the visiting anaesthetist.

It is also appropriate to record the very considerable assistance given to Mr. d'Abreu by the Deputy Medical Superintendent at Yardley Green Road Sanatorium (Dr. G. Eedy), in the gradual development of the surgical work of the department.

X-Ray Department, City Sanatorium

The following table shows the number of radiographs taken during the year :—

Pulmonary	2,253
Bronchograms	192
Pyelograms	43
Bone and joint	591
Barium meals	12
	<hr/>
	3,091
	<hr/>
Pulmonary radioscopy	1,680
Total radiological work	4,771
	<hr/>

Laboratory Service

Reference was made in the report for 1945 to the general re-organisation of the laboratory service and the following statement of the work undertaken is submitted. It relates solely to specimens submitted to the laboratory from the Yardley Green Road Sanatorium.

Nature of Specimen		Total No.	Laboratory Disposal		
			Y.G.Rd*	C.B.L.*	D.R.H.*
BACTERIOLOGICAL					
<i>Sputum</i>	Smears	3,791	3,791	—	—
"	Culture	379	—	379	—
"	Cells	14	—	—	14
"	Penicillin sensitivity	4	—	—	4
<i>Gastric lavage</i>	Culture	271	—	271	—
" "	Animal inoculn.	5	—	5	—
<i>Pleural fluid</i>	Smears	8	1	7	—
" "	Culture	52	—	52	—
" "	Animal inoculn.	8	—	8	—
" "	Penicillin sensitivity	4	—	—	4
" "	Cells	8	—	—	8
<i>Pus</i>	Smears	14	4	10	—
"	Culture	64	—	64	—
"	Penicillin sensitivity	15	—	—	15
<i>Urine</i>	Smears	25	16	9	—
"	Culture	34	—	34	—
"	Animal inoculn.	153	—	153	—
"	Gen. and microscopic	16	16	—	—
<i>Faeces</i>	Smears	733	657	76	—
"	Animal inoculn.	115	—	115	—
"	N.L.F.	398	—	398	—
<i>Swabs</i>	Diphtheria	39	—	39	—
"	Haem. Streptococcus	57	—	57	—
"	Organisms	70	—	70	—
"	Penicillin sensitivity	10	—	—	10
<i>Ascitic fluid</i>	Animal inoculn.	1	—	1	—
" "	Cells and protein	1	—	—	1
<i>Blood</i>	Agglutination	2	—	2	—
<i>Hydrocele fluid</i>	Animal inoculn.	1	—	1	—
<i>Tb. glands</i>	Type of bacillus	1	—	1	—
HAEMATOLOGICAL					
<i>Full blood count and differential count</i>		59	37	—	22
<i>Full blood count</i>		26	22	—	4
<i>White cells and differential</i>		11	11	—	—
<i>White cells</i>		11	11	—	—
<i>Differential count</i>		6	—	1	5
<i>Red cells and haemoglobin</i>		10	10	—	—
<i>Haemoglobin</i>		65	65	—	—
<i>Blood sedimentation rate</i>		7	7	—	—
<i>Blood</i>	Malarial parasites	4	3	1	—
"	Group	22	22	—	—
"	Group and rhesus test	38	—	38	—
<i>Red cells, haemoglobin and group</i>		4	4	—	—
<i>Blood film ? stippled cells</i>		1	1	—	—

Nature of Specimen	Total No.	Laboratory Disposal		
		Y.G.Rd*	C.B.L. *	D.R.H. *
BIOCHEMICAL				
Blood Urea	44	—	—	44
Blood Chlorides	2	—	—	2
Blood Calcium	97	—	—	97
Blood Sugar	16	—	—	16
Blood Van Den Bergh reaction	1	—	—	1
Urinalysis	350	350	—	—
Urine Chemical analysis	1	—	—	1
" Urea conc. test	9	—	—	9
" Bile	1	1	—	—
" Vit. " C " satn. test	3	2	—	1
" Urobilin	1	—	—	1
Faeces Bile	1	—	—	1
" Total fats	1	—	—	1
" Occult blood	7	7	—	—
Fractional test meal	4	—	—	4
PATHOLOGICAL				
Cerebro-spinal fluid Routine	14	—	—	14
Wassermann and Kahn reactions	48	—	48	—
Urine Ascheim Zondek	1	—	—	1
" D.G.I. and G.P.I. Weil's	1	—	1	—
Specimens for Histology	28	—	—	28
OTHER INVESTIGATIONS				
Sputum: Monilia smears	462	462	—	—
	7,649	5,500	1,841	308

* Y.G.Rd.=Yardley Green Road Sanatorium Laboratory.

* C.B.L.=City Bacteriological Laboratory.

* D.R.H.=Pathological Department, Dudley Road Hospital.

Laboratory, Anti-Tuberculosis Centre

In addition to these samples, 6,455 specimens of sputum were examined at the Anti-Tuberculosis Centre.

School

Staff : Headmistress (Miss E. Elrick), and two assistant teachers.

The general organisation and curriculum were mentioned in previous reports. No alteration of significance has been made during the year.

Number of children on roll, 1st January, 1946	30
Number admitted	42
Number discharged	39
Number of children on roll, 31st December, 1946	33

Rehabilitation

The workshop attached to the Yardley Green Road Sanatorium continues to find sheltered employment for a small number of patients. During the year, 41 patients were accepted as trainees and patient employees. £1,975 2s. 0d. was paid in wages. The special department inaugurated during 1945 now provides all splints for the sanatorium.

The diversional therapy department, with classes in boot repairing, shorthand, and art therapy, has made steady progress.

A rehabilitation (employment) clinic has been established at the Anti-Tuberculosis Centre and is under the immediate direction of an assistant tuberculosis officer. The Divisional Rehabilitation Officer (Ministry of Labour), attends this clinic and all patients classified as fit for work by the medical officers are referred to the clinic. During the latter part of the year 71 patients were interviewed, and part-time employment of a comparatively suitable character obtained for 50 of these patients. The routine of supervision requires re-assessment at selected intervals when the patient's reaction to employment is carefully reviewed. This work is obviously capable of considerable extension. It is at present incomplete and requires an elaboration of the present re-employment clinic supported by special provision for rehabilitation, training, temporary or permanent sheltered employment for those patients unable to accept immediate employment in open industry.

Factory

These facilities should become available with the erection of the Re-employment Factory (Disabled Persons Employment Corporation, Ltd.). The site for the factory has been obtained ; plans have been prepared and construction should begin during April, 1947.

The following accommodation will be provided :—

1. Workshop for 300 patients.
2. Canteen facilities.
3. Rest room and solarium for those patient employees whose physical condition requires intervals of rest during the span of duty.
4. Medical department for investigation and research.

The general plan of the factory is shown between pages 128 and 129 and is made available by the courtesy of the Regional Officer of the Disabled Persons Employment Corporation Ltd.

This factory, closely associated with the rehabilitation clinic and with the rehabilitation and vocational schemes developed and under process of development in the sanatoria should be of particular advantage and form the basis for a comprehensive scheme of employment for tuberculous patients in the area.

Mass Radiography

Executive Medical Officer : **Dr. Halliday Sutherland.**

Mass Radiography surveys were introduced in Birmingham during October, 1944, and by December, 1946, 78,319 visitors had been examined.

There has been no change of importance in administration or technical practice. Surveys have been undertaken at factories ; a repeat survey was undertaken at the factory where the original survey was made, and employees from small industrial undertakings and school leavers have been examined at the Mass Radiography department. The scope of the work has been comprehensive and no particular group of the population has been selected for examination. That was the proper procedure during the initial stages of the mass radiography practice. The limitation of the number of units and of trained personnel as well as the approved policy in practice will necessitate greater selection in the future.

Dr. Halliday Sutherland has made arrangements with youth organisations in the City to consider the adoption of serial radiography for their members. These surveys will be co-ordinated with the examination of school leavers and the purpose of the scheme is to develop gradually routine serial radiography for the adolescent and young adult population of the City, and, if conditions prove propitious, to the child and adult contacts of known cases of pulmonary tuberculosis.

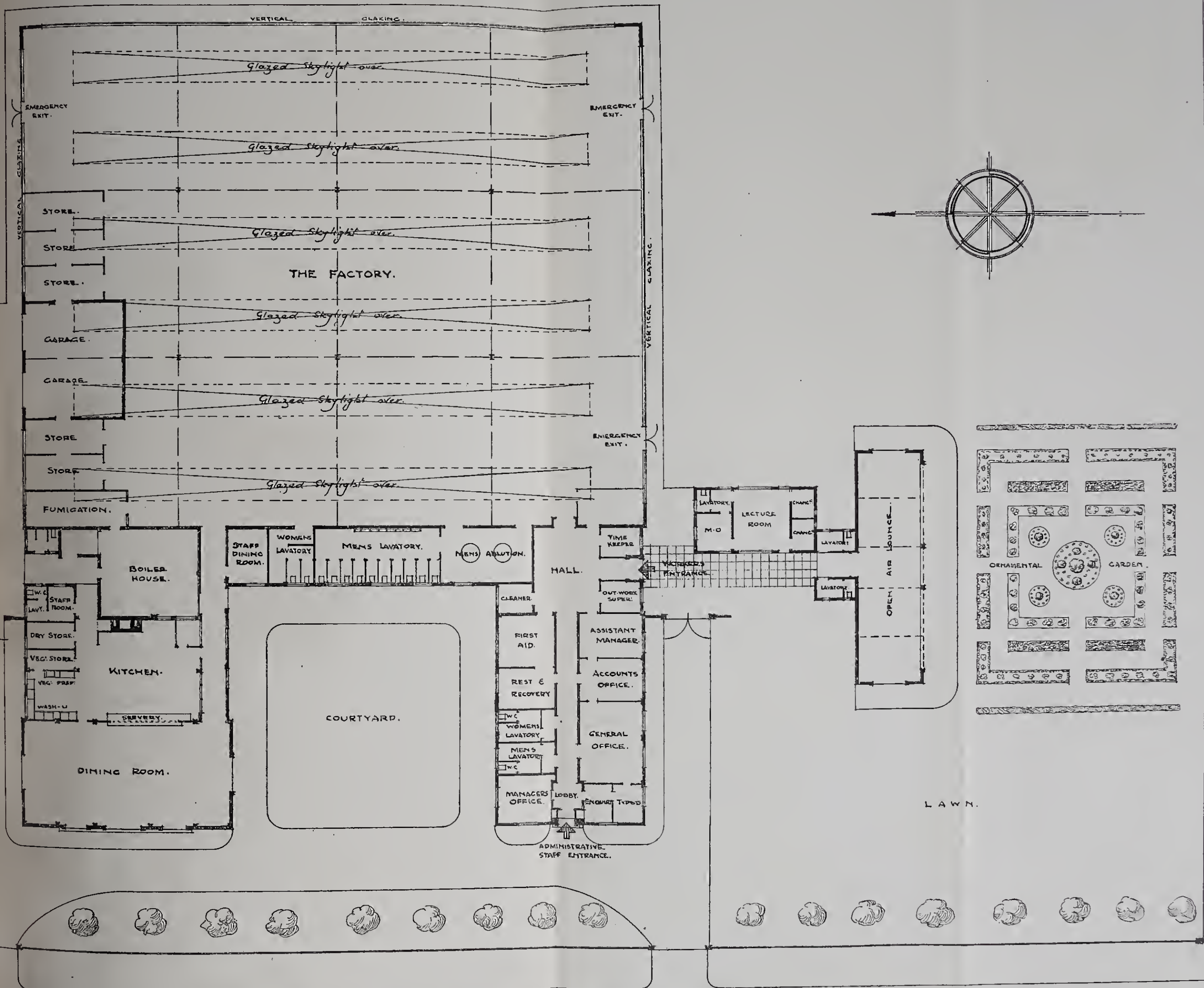
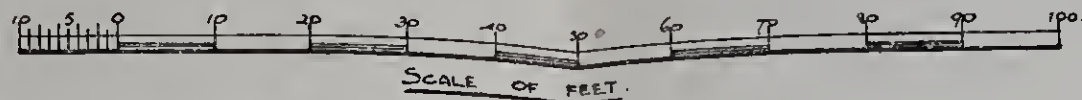
Surveys of all age groups in large factories will be continued, but selection outside the large factory will be adopted and preferential consideration will be given to the youth of the City.

The following tabular statement shows the main statistical facts :—

GENERAL STATISTICS—STATEMENT I (October, 1944—December, 1946)

Number of miniature films taken.	Number of abnormal miniature films.	Number of faulty miniature films (technical).	Total abnormal miniature films.	Percentage of visitors originally examined.
78,319	6,214 (7.9% of those originally examined)	500 (0.6% of those originally examined)	6,714	8.6
Number of abnormal miniature films.	Number of large films taken.	Number of visitors who did not respond to invitation for large film.	Number of abnormal large films.	Percentage of visitors originally examined.
6,714	6,529	185 (2.8% of total recalls for large films)	2,846	3.6
Number of abnormal large films.	Number of visitors with abnormal large films judged to be of no clinical significance.	Number of visitors called for clinical examination, Mass Radiography Department.	Number of visitors who accepted invitation for clinical examination.	Percentage of visitors originally examined.
2,846	1,289 (45.3% of total abnormal large films)	1,557 (54.7% of total abnormal large films).	1,528	2.0
Number of visitors who attended for clinical examination.		Number of visitors who did not respond to invitation for large film or clinical examination.	Number of visitors referred for further investigation.	Percentage of visitors originally examined.
1,528		214 (0.27% of those originally examined)	773	1.0

TYPE PLAN OF FACTORY, TO BE USED FOR THE RE-HABILITATION OF T-B CONVALESCENTS.



GROUND FLOOR PLAN.

These figures show that :—

- (a) 8.6% of the visitors were recalled for a large film.
- (b) 1.99% of the visitors were recalled following the large film for clinical examination.
- (c) 0.99% of the visitors were referred from the unit for further investigation.
- (d) Only 0.27% of the visitors failed in co-operation.

The number who declined the invitation to attend for clinical examination was only 29 or 1.9% of the visitors recalled for clinical examination. This evidence of co-operation is satisfactory, and has not only characterised the initial recalls, but has been equally evident in those visitors referred for later investigation to the anti-tuberculosis centre.

The disposal of 745 (out of 773) visitors referred from the unit for further investigation whose examination at the Anti-Tuberculosis Centre was completed by the end of 1946, is shown in the following table :—

Total	No treatment required.	Supervision from Anti-Tuberculosis Centre.	Admission to Sanatorium.	Observation in Sanatorium.	Failed to attend for further examination.	Referred to Tuberculosis Officer outside the Birmingham area.	Referred to General Practitioner.
745	128	343	65	24	29	89	67

The number of cases of tuberculosis detected was as follows :—

	Number.	Percentage of those originally examined.
(a) All groups (including healed lesions)	1,120	1.4
(b) Number of cases of active pulmonary tuberculosis		
(1) Post primary tuberculosis	177	0.23
(2) Primary tuberculosis	157	0.20
	20	0.03
(c) Number of cases of active pulmonary tuberculosis with sputum positive for tubercle bacilli	66	0.08

• The number of cases of active pulmonary tuberculosis detected was 372 or 0·47% of those initially examined.

Those examined have not been representative of all age groups, or of all social grades, but on a broad analysis the results suggest that within the City there are over 4,800 undetected cases of active pulmonary tuberculosis, and over 800 individuals voiding tubercle bacilli in their sputum unknown to their medical attendants or to themselves.

Mass Radiography—Elementary School Leavers and Secondary School Pupils

The examinations undertaken since the inauguration of Mass Radiography surveys included surveys of school leavers and the results of these surveys are extracted from the general statistics.

The examinations were undertaken at the Central Mass Radiography Department. The co-operation of the parents was readily obtained.

The results are recorded in the following tables :—

ELEMENTARY SCHOOL LEAVERS.

(a)	Total number of Elementary School Leavers	10,731	
	Number who accepted invitation to attend Mass Radiography Department	8,232 (76·7 per cent.)	
	Number of miniature films taken	8,232	
	Number of " abnormal " miniature films	610 (7·4 per cent. of total miniature films)	
	Number of large films taken	589	} 610 (3·4 per cent. failed to attend)
	Number of children who failed to return for large films	21	
(b)	Number of children with abnormal large film judged to be of clinical significance	107 (1·3 per cent. of total miniature films)	
	Number of clinical examinations	101	} 107 (5·6 per cent. failed to attend)
	Number of children who failed to return for clinical examination	6	
	Number of cases of tuberculosis (all forms)	59 (0·7 per cent. of total miniature films)	
	Active primary tuberculous lesions	2	} 59
	Inactive primary tuberculous lesions	53	
	Active post-primary tuberculous lesions	1	
	Inactive post-primary tuberculous lesions	3	

TOTAL NUMBER OF CASES OF ACTIVE LUNG TUBERCULOSIS—3 (or 0·04 per cent. of total miniature films taken).

These figures emphasise the comparative infrequency of active lung tuberculosis in this age group, and as mentioned in the report for 1945 these surveys will in the future be confined to the leavers from the secondary schools.

SECONDARY SCHOOL PUPILS.

(a)	Total number of Secondary School Pupils	.....	12,276	
	Number who accepted invitation to attend Mass Radiography Department	.....	10,802	(88 per cent.)
	Number of miniature films taken	.....	10,802	
	Number of " abnormal " miniature films	.....	544	(5 per cent. of total miniature films)
	Number of large films taken	.....	543	} 544 (0.18 per cent. failed to attend)
	Number of children who failed to return for large film	.....	1	
			
(b)	Number of children with abnormal large film judged to be of clinical significance	.....	107	(0.99 per cent. of total miniature films)
	Number of clinical examinations	106	} 107 (0.9 per cent. failed to attend)	
	Number of children who failed to return for clinical examination	1		
			
	Number of cases of tuberculosis	.....	104	(0.96 per cent. of total miniature films)
	Active primary tuberculous lesions	.....	7	} 104
	Inactive primary tuberculous lesions	.....	85	
	Active post-primary tuberculous lesions	.....	6	
	Inactive post-primary tuberculous lesions	.....	6	
			

TOTAL NUMBER OF CASES OF ACTIVE LUNG TUBERCULOSIS—13 (or 0.12 per cent. of total miniature films taken).

Supervision

The following statement shows the form of later supervision arranged for 68 children in whom evidence of tuberculosis was detected during the mass radiography examinations.

Sanatorium supervision and treatment	.....	13
General supervision from the Anti-Tuberculosis department	.....	55
		—
		68
		==

The Mass Radiography team is constituted as follows:—

- 1 Executive medical officer.
- 2 Radiographers.
- 1 Dark room technician.
- 1 Marshaller.
- 1 Senior Clerk.
- 4 other clerks.

I desire to record the very great advantage derived from the visits of Dr. James Brailsford, the consultant radiologist and to record with appreciation the considerable work developed by Dr. Halliday Sutherland and staff throughout the year.

DEVELOPMENT OF THE TUBERCULOSIS SERVICE

During June a comprehensive report was submitted to the City Council with regard to the development of the Tuberculosis Service. The recommendations were approved by the City Council and it is appropriate that an abbreviated record of that report should be included here.

The facilities for treatment for all forms of tuberculosis in adults and children were considered in detail and similar attention was given to the domestic and industrial environment of the tuberculous patient and his family.

The scheme as finally approved by the City Council is described briefly in the following statement :—

Anti-Tuberculosis Centre

The Tuberculosis Sub-Committee now maintain a single centrally situated dispensary with complete diagnostic facilities and the necessary accommodation for the administrative and after-care work of the service. This Centre will be extended to provide seven consulting rooms instead of four and complete facilities for the installation and operation of a miniature radiography unit. The unit will be concerned principally with the examination of child and adult contacts.

(1) Contacts

The examination of contacts is essential work. It is obviously illogical to find the patient and ignore the contacts. The detection of the patient should be followed by immediate examination and regular supervision of all adult and child contacts. The contact unit is the family and other residents in and regular visitors to the household. The range of this work is great but its importance will be generally admitted. It can be undertaken and maintained at a constant level of efficiency by the adoption of miniature radiography.

The provision of facilities at the Centre for this specialised form of radiography has therefore been accepted as an important requirement of the department in the full discharge of its obligations in the control of tuberculous infection and disease.

(2) Home for Contact Infants and Children

The examination and clinical supervision of the contact child does not necessarily discharge the responsibility of the department. It may become necessary to offer facilities for the immediate removal of the child where for one reason or another the circumstances in the home are detrimental. This will be accomplished by the provision of a home for thirty contact children within easy access of the central districts of the City.

(3) **Housing**

The practice of sanatorium treatment without suitable attention to the home conditions of the patient is evidently injudicious and preventive work becomes an exercise in theory where the circumstances in the home frustrate elementary hygienic practice. This aspect of the work was given particular attention and a scheme approved which accepted the principle of a home with separate bedroom accommodation for each tuberculous patient in the City. This will be accomplished by close co-operation with the Estates Department and by the purchase of houses by the Public Health Committee to support the re-housing policy of the Estates Committee for tuberculous patients.

These recommendations focus attention upon the major importance of environmental factors in the control of tuberculous infection and disease.

Sanatorium Beds

Prompt and prolonged sanatorium treatment is necessary for the majority of patients. Adequate bed accommodation is an obvious necessity and the scheme envisages the provision of 1,656 beds for the treatment of all forms of tuberculosis in adults and children. The allocation of these beds is indicated in a later section of this statement.

At present patients are admitted to any of the four sanatoria, but that practice will be altered by a procedure which will require the admission of all adults to an enlarged sanatorium at Yardley and all children to a special children's sanatorium at Salterley Grange, Cheltenham.

The Yardley Sanatorium (or chest hospital), will act as the reception sanatorium. There a clinical assessment will be made and appropriate treatment adopted. The diagnostic and treatment facilities, both medical and surgical, will be provided in accordance with the most modern practice.

With convalescence, and at a stage approved by the physician, surgeon and occupational specialist, female patients will be transferred to the Romsley Hill Sanatorium and males to the West Heath Sanatorium.

The particular general and special accommodation recommended and approved for each of these sanatoria is shown in the following section.

Yardley Green Road Sanatorium. (Chest Hospital).

Accommodation at present, 415 beds. Proposed extension to 808 beds. The beds will be allocated as follows :—

590 beds for cases of pulmonary tuberculosis in males and females.

116 beds for cases of non-pulmonary tuberculosis with separate ward accommodation for those patients with combined pulmonary and non-pulmonary disease. This will require the maintenance of an orthopaedic department and suitable recommendations have been made.

26 beds, with labour ward and separate nursery, for tuberculous pregnant women.

30 beds for thoracic surgery comprised of 10 beds attached to the operating theatre with 20 beds for immediate pre-operative and post operative cases.

40 beds for observation where the diagnosis of tuberculosis is in doubt.

In connection with the provision of accommodation for thoracic surgery, it may be noted that the Hospital Survey Report recommended that :—

“ This sanatorium should be closely linked with the University Thoracic Unit.”

The following statement extracted from the Public Health Committee's report to the City Council is appended :—

“ Your Committee find it necessary to traverse this opinion in so far as it may be intended to imply that thoracic surgery is not to be carried out at the sanatorium. For while the treatment of pulmonary tuberculosis often requires surgical action complex in character and technique, it is fundamentally important that, despite this complexity, such measures should be regarded as an incident in treatment, enhancing rather than obviating the need for sanatorium treatment. To treat the tuberculosis patient, therefore, with thoracic surgery, in a clinic not concerned with his tuberculous condition as such, but merely as a subject for special surgery, would be contrary to the interest of the patient. For that reason your Committee propose to continue and to extend, as here indicated, their present policy of maintaining a unit for thoracic surgery at Yardley Green Road Sanatorium. It might indeed be appropriate to extend the facilities here for tuberculous thoracic surgery to Authorities outside Birmingham, if so desired by them, in view of the highly specialised character of the service.”

Hostel Accommodation

Hostel accommodation will be provided in proximity to this sanatorium and will be available for those patients with chronic pulmonary tuberculosis whose physical tolerance make employment in open industry undesirable, and whose clinical and domestic circumstances do not justify a return to their home. Domestic life in these hostels will be closely linked with a scheme of employment in a special factory to which reference is made in a later section of this statement.

This sanatorium will also make provision for the treatment and care of the advanced case ; the admission of these patients to a particular sanatorium or ward will be discontinued. The future practice will ensure nursing and medical attention of the highest skill for these patients and will disperse any association in the mind of the public and of the patient between a particular sanatorium or ward and the advanced progressive case of pulmonary tuberculosis.

Romsley Hill Sanatorium

Present accommodation 120 beds ; proposed extension to 250 beds.

This sanatorium will be concerned with the continuance of treatment of female adult patients transferred from the central sanatorium at Yardley. It will have particular facilities for rehabilitation and comment on that aspect of the scheme will be made later.

West Heath Sanatorium

Present accommodation 150 beds ; proposed extension to 250 beds.

This sanatorium will make provision for male adult patients on the same basis as the Romsley Hill Sanatorium for female patients.

Children

The above section relates exclusively to the provision which is contemplated for adult patients. The present accommodation for children is inadequate and has the considerable disadvantage of being provided in a sanatorium for tuberculous adults. This practice is to cease, and separate accommodation for children is to be provided at the **Salterley Grange Sanatorium**.

Present accommodation 68 beds ; proposed extension to 318 beds.

These beds will be allocated as follows :—

250 beds will be provided for the treatment of all forms of tuberculosis in children.

34 beds in an admission ward for the temporary segregation of all children on admission.

34 beds for isolation.

School room accommodation will be provided both in the form of separate school rooms and by particular provision in the ward blocks for children confined to bed.

Rehabilitation and Employment

A comprehensive scheme of rehabilitation and employment which will develop concurrently with clinical treatment is an integral component of the general plan. Rehabilitation is an accepted principle in all medical practice and is of predominant importance in the treatment of tuberculosis. The question of return to employment will be constantly under review during the course of treatment and a decision reached at the earliest possible date on the all important question as to whether the patient will be able to return to his previous employment. Considerable attention has therefore been given to the provision which will be made, and this may be summarised as follows :—

Yardley Green Road Sanatorium. Central Sanatorium

Suitable provision will be made in this sanatorium for diversional therapy but that form of therapy will be replaced by vocational therapy as soon as the clinical condition warrants the extra physical effort required. A tentative decision will be made at this stage with regard to the probable return of the patient to his previous employment. That decision will determine the form of later rehabilitation. Where the patient is likely to return to his previous employment rehabilitation within the sanatorium will be concerned primarily with the maintenance of mental and physical dexterity. Where the patient will be unable to return to his previous employment rehabilitation will be concerned with preparation for a different form of employment.

These decisions will be made whilst the patient is in Yardley Green Road Sanatorium, where suitable preliminary vocational therapy will have been inaugurated.

Female Patients

Female patients will be transferred to the Romsley Hill Sanatorium and in so far as rehabilitation is concerned will be separated into two main groups—those who are housewives and those whose employment is in industry or business. The former group will, prior to discharge, spend several weeks in specially designed houses where domestic hygiene and household management will be taught. The latter group will be employed on a remunerative basis in a special workshop where the form of employment will be related to the character of their employment.

Male Patients

Exactly the same procedure will be adopted with male patients but workshop provision will be more elaborate and domestic training, of course, eliminated.

Rehabilitation and Re-employment on Discharge

On discharge from the sanatorium workshops at Romsley Hill or at West Heath the majority of patients will require a period of industrial convalescence and that will be obtained by the use of special factories which will probably be provided and be under the administrative control of the Disabled Persons Employment Corporation Ltd.

The form of employment in these factories will be closely related to the form of employment in the sanatorium workshops to ensure continuity in the Rehabilitation and Re-employment programme.

The purpose of these factories will be to make generous provision for industrial recuperation for all patients who will ultimately return to their previous jobs, but as sheltered workshops they will make valuable provision for those patients, whether residing in their own homes or in the Hostels at the Yardley Green Road Sanatorium, whose clinical condition contraindicates employment in open industry.

The general scheme which has been very briefly described is illustrated in the following diagram.

HOUSES MAINTAINED SOLELY BY PATIENT, OR WHERE NECESSARY, BY SUBSIDY FROM LOCAL AUTHORITY.

HOUSES MAINTAINED SOLELY BY PATIENT, OR WHERE NECESSARY, BY SUBSIDY FROM LOCAL AUTHORITY.

HOUSES FOR DOMESTIC TRAINING

SANATORIUM WORKSHOPS.

OPEN INDUSTRY

SANATORIUM WORKSHOPS

PERMANENT SHELTERED EMPLOYMENT.

TEMPORARY SHELTERED EMPLOYMENT WITH RETURN TO OPEN INDUSTRY; BUT NOT TO PREVIOUS OCCUPATION.

TEMPORARY SHELTERED EMPLOYMENT WITH RETURN TO OPEN INDUSTRY AND TO PREVIOUS OCCUPATION.

DIRECT RETURN TO OPEN INDUSTRY.

PERMANENT SHELTERED EMPLOYMENT.

TEMPORARY SHELTERED EMPLOYMENT WITH RETURN TO OPEN INDUSTRY; BUT NOT TO PREVIOUS OCCUPATION.

TEMPORARY SHELTERED EMPLOYMENT WITH RETURN TO OPEN INDUSTRY AND TO PREVIOUS OCCUPATION.

DIRECT RETURN TO OPEN INDUSTRY.

ROMSLEY SANATORIUM. 250 BEDS. FEMALE PATIENTS.

HOME FOR CONTACT CHILDREN.

MEDICAL PRACTITIONER OR HOSPITAL.

MASS RADIOGRAPHY DEPARTMENT.

WEST HEATH SANATORIUM. 250 BEDS. MALE PATIENTS.

ANTI-TUBERCULOSIS CENTRE.

SALTERLEY GRANGE SANATORIUM. CHILDREN

YARDLEY GREEN SANATORIUM. 808 BEDS.

HOSTELS FOR CHRONIC CASES.

WORKSHOP FOR CHRONIC CASES.

29112
100

The year has been a particularly difficult one by reason of shortage ofatorium beds and the need to meet innumerable difficulties which arose because of this situation. I therefore desire to express my acknowledgment of the work undertaken by all members of the staff, particularly those senior lay administrators at the Anti-Tuberculosis Centre.

VENEREAL DISEASES

The records for 1946 in respect of venereal disease are disappointing, for there was a marked increase in the number of new cases, both of syphilis and of gonorrhoea, as shown below :—

	<i>Syphilis</i>	<i>New Cases</i>		<i>Other Conditions</i>
		<i>Soft Chancre</i>	<i>Gonorrhoea</i>	
General Hospital	732	—	1,451	4,048
Children's Hospital	5	—	4	24
Lancaster Street	83	—	32	1,349
Birmingham Infirmary	15	—	23	16
TOTAL	835	—	1,510	5,437

One can only surmise that the increase, coinciding with the substantial completion of demobilisation, is directly the result of that fact, with the return to civil life of numbers of individuals infected, and either undetected or incompletely treated during their war service.

The following table gives the data over a period of ten years :—

	<i>Syphilis</i>	<i>Soft Chancre</i>	<i>Gonorrhoea</i>	<i>Other Conditions</i>
1937	326	1	1,011	2,233
1938	346	—	955	2,423
1939	330	1	948	2,282
1940	318	1	835	1,957
1941	343	4	940	2,261
1942	515	2	1,030	2,906
1943	685	—	878	4,816
1944	604	—	765	4,583
1945	567	—	1,061	4,695
1946	835	—	1,510	5,437

The attendances for “other conditions” showed a marked increase, so that public consciousness of the gravity of the matter would seem to be growing.

The total attendances for treatment are indicated below :—

1937	125,408	1942	83,776
1938	131,611	1943	97,973
1939	88,083	1944	92,915
1940	75,936	1945	84,539
1941	73,175	1946	96,515

Further particulars of the work done at the Centres in 1946 are as follows :—

	<i>Syphilis.</i>	<i>Soft Chancre.</i>	<i>Gonorrhoea.</i>	<i>Other Conditions.</i>
No. of cases under treatment, Jan. 1st, 1946.....	1,494	1	457	518
New cases under treatment during year	835	—	1,510	5,437
Total attendances	47,748	47	20,603	28,117
No. discharged after completion of treatment and observation	387	9	1,341	5,426
No. transferred to other centres	295	1	263	52
No. who ceased to attend:				
Before completion of treatment	180	—	111	—
After completion of treatment but before final tests as to cure	86	—	105	—
No. of cases of congenital syphilis treated :				
Under 1 year of age	6	Aged 5-15 years	8	
Aged 1-5 years	3	Aged 15 years and over	31	
TOTAL		48		

The corresponding number in 1945 was 68. The reduction in the number of cases of congenital syphilis is a very satisfactory feature, reflecting credit on the effectiveness of the antenatal care service, with its systematic examination from this as from other standpoints.

Contact Tracing

The arrangements set out in detail in the report for 1945 continued to apply, and need not here be enumerated again.

The work of the Almoner's Department and of the social workers has been carried out with tact and consideration, to the benefit of many who would not otherwise have sought treatment.

Particulars under Regulation 33B

Number of contacts in respect of whom Form I was received	32
Not traced owing to insufficient information	17
Contacts found and visited	15
Contacts examined or already under treatment	12
Number of contacts in respect of whom two or more Forms I were received	6
Not traced owing to insufficient information	5
Contacts found and visited	1
Contacts examined or already under treatment	1
Contacts examined after service of Form II	—
Prosecutions	—

Educational Work

This is merged in the wider aspect of Health Education as a whole, and receives reference in the Maternity and Child Welfare section of this Report.

DEATH-RATES PER 1,000 OF POPULATION FROM

DEATH-RATES PER 1,000 LIVE BIRTHS

YEAR	Population Estimated to middle of each year	Birth-rate	Death-rate	Infant Mortality rate per 1,000 Births	Enteric Fever	Small Pox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Tuberculosis		Cancer	Diseases of Nervous System	Diseases of Circulatory System	Diseases of Respiratory System	Diseases of Digestive System	Diseases of Genito- Urinary System	Suicides	Other Violence	Congenital Debility, Premature Birth, Malformations, etc. (under 1)	Dysentery and Diarrhoea (under 2)	Puerperal Fever	Other Accidents of Child Birth
												Respiratory	Other Forms												
1911	842,337	26.1	15.0	150	.04	.00	.47	.10	.17	.13	.09	1.14	.32	.89	1.36	1.33	2.51	?	?	.12	.41	?	10.8	1.64	2.18
1912	850,947	26.1	14.1	111	.04	—	.67	.18	.39	.12	.12	1.28	.24	.93	1.36	1.33	2.68	.95	.50	.07	.45	48.4	10.8	1.22	2.03
1913	859,644	27.3	14.9	129	.02	—	.46	.20	.19	.13	.13	1.19	.34	1.02	1.35	1.53	2.48	.68	.56	.11	.45	48.2	35.5	1.85	2.01
1914	882,534	26.4	14.8	122	.02	—	.35	.17	.35	.16	.16	1.20	.27	.88	1.37	1.74	2.69	.49	.51	.09	.43	47.2	27.6	1.42	1.77
1915	891,234	23.8	14.4	118	.02	—	.47	.14	.15	.15	.16	1.28	.27	.88	1.00	1.36	2.62	.31	.48	.05	.45	42.8	25.3	1.56	1.79
Average	881,234	25.9	14.6	126	.03	.00	.48	.14	.25	.15	.13	1.22	.29	.94	1.36	1.60	2.64	1.36	.51	.09	.44	46.6	25.3	1.56	1.96
1916	885,678	25.9	13.5	104	.01	—	.11	.03	.42	.13	.16	1.24	.24	1.00	1.29	1.88	2.60	1.07	.45	.05	.40	39.9	18.4	1.50	1.94
1917	900,000	19.4	12.6	101	.01	—	.37	.01	.14	.13	.11	1.30	.26	1.02	1.23	1.87	2.10	.88	.44	.06	.38	43.8	18.4	1.47	1.13
1918	870,000	19.4	15.2	99	.01	—	.20	.05	.06	.14	1.15	1.10	.25	1.02	1.18	1.76	2.85	.96	.30	.07	.35	38.7	18.5	1.72	1.31
1919	910,000	20.9	13.0	84	—	—	.16	.12	.20	.16	1.15	1.06	.25	1.02	1.06	1.72	2.67	.86	.35	.11	.34	40.0	9.5	1.70	1.35
1920	910,000	27.6	12.6	83	—	—	.16	.12	.22	.16	1.15	1.06	.25	1.02	1.06	1.72	2.67	.86	.35	.11	.34	40.0	9.5	1.70	1.35
Average	910,000	22.1	13.4	94	.01	—	.18	.04	.23	.16	.16	1.18	.22	1.03	1.17	1.79	2.54	.88	.39	.08	.36	39.4	14.3	1.56	1.56
1921	919,683	24.1	11.3	83	.01	—	.17	.04	.10	.13	1.15	.97	.16	1.12	0.98	1.64	2.02	.93	.38	.10	.26	36.6	16.6	1.17	1.47
1922	927,844	21.5	12.1	86	.00	—	.09	.04	.38	.10	1.15	.97	.16	1.12	0.98	1.64	2.02	.93	.38	.10	.26	36.6	16.6	1.17	1.47
1923	936,079	20.4	11.0	72	.00	—	.20	.04	.05	.15	1.28	.92	.16	1.17	1.00	1.85	2.38	.66	.37	.12	.35	31.4	8.5	1.26	1.76
1924	944,386	19.2	11.6	83	.01	—	.08	.02	.19	.10	1.39	.97	.13	1.30	1.01	1.91	2.15	.70	.37	.10	.31	37.2	9.2	1.01	1.90
1925	952,766	18.8	11.7	78	.00	—	.11	.02	.23	.10	1.39	.98	.16	1.27	0.98	2.12	1.97	.73	.37	.11	.33	34.0	11.3	1.96	2.19
Average	961,222	18.7	11.3	73	.00	—	.08	.01	.13	.12	1.27	.94	.12	1.26	1.07	2.12	1.88	.73	.40	.12	.32	32.2	11.2	2.29	1.84
1926	969,752	17.8	11.8	75	.00	.00	.13	.01	.07	.08	1.41	.89	.17	1.36	0.95	2.28	1.89	.70	.41	.15	.36	35.1	9.3	1.45	2.14
1927	976,500	17.6	10.9	65	.00	.00	.04	.01	.17	.07	1.33	.86	.13	1.35	0.94	2.41	1.56	.67	.48	.16	.40	31.6	9.3	1.86	1.97
1928	981,000	17.1	13.5	79	.00	.00	.20	.01	.13	.09	1.09	.94	.15	1.34	0.98	2.76	2.32	.76	.53	.16	.42	35.4	13.9	1.55	2.44
1929	982,000	17.7	10.8	60	.01	.00	.06	.02	.11	.09	1.09	.94	.13	1.43	0.98	2.57	2.32	.60	.44	.15	.40	30.6	7.6	1.55	1.84
1930	982,000	17.7	10.8	60	.01	.00	.06	.02	.11	.09	1.09	.94	.13	1.43	0.98	2.57	2.32	.60	.44	.15	.40	30.6	7.6	1.55	1.84
Average	1,001,300	16.9	11.7	71	.00	.00	.10	.01	.12	.09	.47	.91	.13	1.35	0.96	2.43	1.78	.69	.45	.15	.38	33.0	10.7	1.74	2.05
1931	1,001,300	16.9	11.7	71	.00	.00	.18	.01	.09	.06	1.27	.92	.14	1.46	0.77	2.90	1.61	.62	.45	.19	.35	33.6	8.7	1.64	2.17
1932	1,017,500	14.7	11.3	67	.00	.00	.05	.01	.13	.03	.36	.83	.10	1.45	0.87	2.73	1.47	.59	.45	.17	.39	33.6	7.7	1.68	2.05
1933	1,023,500	14.7	11.0	68	.00	.00	.08	.02	.13	.03	.44	.85	.11	1.43	0.70	2.94	1.32	.61	.40	.17	.39	33.6	7.7	1.68	2.05
1934	1,028,000	15.3	10.9	68	.01	.00	.05	.01	.11	.08	.18	.71	.08	1.52	0.76	3.04	1.26	.67	.44	.16	.38	35.0	8.7	1.85	1.98
1935	1,033,000	15.4	10.9	64	.00	.00	.02	.01	.06	.08	.15	.71	.08	1.52	0.76	3.04	1.26	.67	.44	.16	.38	35.0	8.7	1.85	1.98
Average	1,033,000	15.7	11.2	67	.00	.00	.08	.01	.08	.06	.28	.80	.10	1.45	0.76	2.95	1.35	.82	.44	.16	.38	34.6	8.1	1.66	2.07
1936	1,038,000	15.8	11.2	62	.00	.00	.07	.01	.09	.06	.13	.71	.07	1.57	0.69	3.43	1.22	.82	.45	.12	.38	32.8	5.1	1.53	2.14
1937	1,043,000	16.3	11.7	60	.00	.00	.04	.01	.09	.08	.13	.70	.08	1.62	0.73	3.43	1.22	.82	.45	.12	.38	32.8	5.1	1.53	2.14
1938	1,048,000	16.6	10.9	61	.00	.00	.07	.01	.07	.08	.16	.77	.08	1.59	0.61	3.45	1.19	.86	.43	.15	.39	33.1	5.1	0.77	2.30
1939	1,055,000	16.6	11.4	60	.00	.00	.02	.00	.05	.05	.16	.77	.08	1.59	0.61	3.45	1.19	.86	.43	.15	.39	33.1	5.1	0.77	2.30
1940	1,020,000	16.9	14.3	70	.00	.00	.01	.01	.05	.05	.22	.77	.07	1.59	0.61	3.45	1.19	.86	.43	.15	.39	33.1	5.1	0.77	2.30
Average	1,020,000	16.4	11.9	63	.00	.00	.03	.01	.06	.06	.21	.73	.07	1.59	0.61	3.45	1.19	.86	.43	.15	.39	33.1	5.1	0.77	2.30
1941	950,000	16.8	13.2	69	.01	.00	.05	.00	.12	.09	.15	.81	.09	1.77	1.28	3.10	1.94	.72	.45	.12	.44	29.4	9.8	0.82	1.75
1942	965,000	19.3	11.8	56	.00	.00	.02	.00	.05	.05	.15	.77	.09	1.77	1.28	3.10	1.94	.72	.45	.12	.44	29.4	9.8	0.82	1.75
1943	965,000	20.9	12.1	55	.00	.00	.01	.00	.06	.04	.34	.71	.09	1.83	1.34	3.02	1.73	.46	.43	.11	.37	25.4	9.1	0.79	0.74
1944	990,000	22.8	11.3	42	.00	.00	.00	.03	.02	.11	.70	.09	.17	1.75	1.29	3.15	1.40	.43	.42	.08	.32	21.7	6.0	0.82	0.75
1945	990,000	19.9	11.2	50	.00	.00	.03	.00	.06	.08	.07	.68	.07	1.84	1.33	3.14	1.44	.44	.41	.10	.27	22.3	7.8	0.71	0.96
Average	1,017,100	19.9	11.3	54	.00	.00	.02	.00	.06	.04	.15	.73	.08	1.78	1.31	3.10	1.60	.54	.43	.10	.34	25.0	8.8	0.77	1.14
1946	1,017,100	22.5	11.3	40	.00	.00	.01	.03	.03	.01	.11	.61	.07	1.90	1.32	3.36	1.37	.44	.36	.12	.30	20.9	6.1	0.13	0.74

*Exclusive of General Paralysis

CAUSES OF DEATH AT DIFFERENT AGE PERIODS IN 1946

[illegible]

BLE III

CASES OF INFECTIOUS DISEASE NOTIFIED AND VERIFIED DURING 1946,
CLASSIFIED ACCORDING TO SEX AND AGE.

Disease.	Sex.	AGE GROUPS.														Totals
		0—	1-2	2-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75 up		
typhoid Fever	M. F.	1 —	— —	2 —	1 —	3 1	— —	— —	3 1	— 1	— 1	— —	— 1	1 —	11 5	
scarlet Fever	M. F.	1 2	60 62	122 109	287 352	115 183	16 40	11 18	4 29	9 18	6 3	— —	— —	— —	631 816	
diphtheria	M. F.	2 3	18 11	26 14	44 51	35 44	5 12	4 17	8 17	1 4	1 4	— 1	— —	— —	144 178	
erysipelas	M. F.	— —	3 1	— —	— 3	2 2	2 1	4 9	9 13	23 33	32 51	19 40	16 17	5 14	115 184	
pulmonary Tuberculosis	M. F.	3 4	10 2	21 17	20 18	13 22	58 87	63 119	125 102	110 55	107 37	91 14	26 3	7 1	654 481	
tubercular Meningitis	M. F.	1 2	1 —	1 1	3 3	1 —	2 —	1 1	— —	— —	1 —	— —	— —	— —	11 7	
tuberculosis of Peritoneum & Intestines	M. F.	— —	— —	— —	— —	2 2	— —	— 3	— 5	2 —	1 —	— —	— —	— —	5 10	
other forms of Tuberculosis	M. F.	— 3	1 1	4 5	14 9	2 10	5 8	9 11	8 9	8 6	4 3	3 4	1 2	1 1	60 72	
cerebro-spinal Fever	M. F.	8 8	8 6	6 2	6 4	2 1	4 1	2 2	1 1	3 4	1 1	1 1	— —	— —	42 31	
anterior Poliomyelitis	M. F.	2 —	4 3	— 2	3 2	1 1	1 —	3 1	1 —	1 —	— —	— —	— —	— —	16 9	
polio-encephalitis	M. F.	— —	— —	— —	— —	1 —	— —	— —	— —	— —	— —	— —	— —	— —	1 0	
encephalitis Lethargica	M. F.	— —	— —	— —	— —	— —	— —	— 1	2 —	1 —	— —	— —	1 —	1 —	5 1	
malaria	M. F.	— —	— —	— —	— —	— —	— —	6 —	17 —	9 —	— —	— —	— —	— —	32 0	
dysentery	M. F.	11 12	42 33	11 8	15 13	9 6	1 4	4 11	18 15	9 12	3 6	2 9	2 7	1 1	128 137	
smallpox	M. F.	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	0 0	
pneumonia	M. F.	59 60	83 64	54 48	69 45	23 19	28 19	26 32	84 83	113 68	125 67	106 77	83 65	42 42	895 689	
ophthalmia Neonatorum	M. F.	469 362	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	469 362	
interperal Pyrexia	M. F.	— —	— —	— —	— —	— —	15 —	94 —	148 —	51 —	— —	— —	— —	— —	0 308	
measles	M. F.	116 134	647 618	665 669	730 708	23 29	4 13	7 12	7 14	2 4	— 3	— 2	— —	— —	2201 2206	
whooping Cough	M. F.	268 319	904 908	695 808	595 639	10 18	3 2	1 2	3 10	1 2	— 2	— 1	1 1	— —	2480 2712	
undulant Fever	M. F.	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	— —	0 0	

TABLE IV

BIRTH, DEATH AND INFANT MORTALITY RATES IN WARDS, 1946

WARDS	Population	BIRTHS		DEATHS		INFANT DEATHS	
		Number	Rate per 1,000 population	Number	Rate per 1,000 population	Number	Rate per 1,000 live births
St. Paul's	18,500	513	27.7	274	14.8	32	62
St. Mary's	14,600	446	30.6	251	17.2	22	49
Duddeston and Nechells.....	22,800	674	29.6	322	14.1	30	44
St. Bartholomew's	15,800	449	28.4	233	14.7	21	47
St. Martin's and Deritend	17,500	486	27.8	334	19.1	32	66
Market Hall	11,800	326	27.6	167	14.1	17	52
Ladywood	21,200	598	28.2	300	14.2	31	52
Average of Central Wards	122,200	3,492	28.6	1,881	15.4	185	53
Lozells	24,500	593	24.2	308	12.6	22	37
Aston	25,800	624	24.2	324	12.6	25	40
Washwood Heath	30,700	616	20.1	330	10.7	27	44
Saltley	23,300	526	22.6	324	13.9	22	42
Small Heath	25,900	598	23.1	312	12.0	22	37
Sparkbrook	25,800	681	26.4	305	11.8	31	46
Balsall Heath	27,300	696	25.4	386	14.1	30	43
Edgbaston.....	28,000	513	18.3	376	13.4	22	43
Rotton Park	26,000	572	22.0	351	13.5	31	54
All Saints'	23,200	505	21.8	325	14.0	28	55
Average of Inner Ring Wards	260,500	5,924	22.7	3,341	12.8	260	44
Soho	23,200	436	18.8	321	13.8	15	34
Sandwell	21,200	405	19.1	268	12.6	17	42
Handsworth	28,300	594	21.0	389	13.7	23	39
Perry Barr	72,500	1,605	22.1	414	5.7	54	34
Erdington	33,200	644	19.4	328	9.9	28	43
Gravelly Hill	30,400	678	22.3	313	10.3	21	31
Bromford	27,700	658	23.7	247	8.9	27	41
Stechford	58,200	1,372	23.6	439	7.5	62	45
Yardley	34,900	715	20.5	389	11.1	27	38
Acocks Green	35,800	671	18.7	343	9.6	14	21
Hall Green	45,700	810	17.7	380	8.3	38	47
Sparkhill	32,000	704	22.0	399	12.5	29	41
Moseley and King's Heath	45,000	930	20.7	458	10.2	26	28
Selly Oak	30,300	607	20.0	341	11.3	13	21
King's Norton	35,800	718	20.1	406	11.3	19	26
Northfield	45,600	1,007	22.1	390	8.6	44	44
Harborne	34,600	609	17.6	353	10.2	14	23
Average of Outer Ring Wards	634,400	13,163	20.7	6,178	9.7	471	36
Ward of domicile not known		(1,551) 356		120		4	
Total for whole City	1,017,100	22,935	22.5	11,520	11.3	920	40

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